THE LANCET.

VOL. I.] LONDON, SATURDAY, JANUARY 3, 1835. [1834-35.

PHYSIOLOGY.

LECTURES

ON THE

PHYSICAL CONDITIONS

OF THE

TISSUES OF THE HUMAN BODY

AS APPLIED TO THE EXPLANATION OF

VITAL PHENOMENA.

Delivered at the College of France in 1834.

BY F. MAGENDIE,

Professor of Physiology and Medicine in the College.

LECTURE XIV.

Physical Properties of Dead and Living Tissues the same.—Inflation of the Lungs in Asphyxia.—Danger of Interruptions to the Elasticity of the Lungs.—Its Influence on the Form of the Diaphragm.—Causes of a Change in the Elasticity of the Lungs.—Broken-wind.—Death from sudden and violent Inspiration.—Diseases arising from partial destruction of the Elasticity of the Lungs.

THE remark which I made at the close of the last lecture applies also to sensibility, which every one acknowledges to be connected with nervous influence and life. The tissues of the dead body are insensible, because they have ceased to live; but turn to any of the physical properties of which we have spoken in the preceding lectures, and mark the contrast. Is dead cartilage inelastic? Does a dead artery cease to react on the fluid distending it? Certainly not. Fill a dead artery with fluid, tie both ends, make a small opening in its parietes, and you will have a jet of fluid for a considerable time, until the elasticity ceases to act, because there is no longer a distending force. In the same way elasticity of the lung remains after death, and produces the several phenomena dependent on it, because it is a physical property of the tissue, unconnected with and independent of life. Nothing is more easy than to furnish you with examples and proofs of this: here is the lung of a beast which has been blown up by the butcher to the greatest degree; but it has returned, as you see, to its normal dimensions, in virtue of the elastic property possessed by its intimate structure.

You shall now see an experiment illustrating directly the contractile power of the lung. Here is a pigeon, whose thorax has been opened on one side, in order to give a perfect view of the lungs *in situ*, and to permit you to see what passes during the dilatation and contraction of that organ. The right lung thus exposed does not completely fill the cavity of the chest, but appears considerably contracted, and this arises partly from its elasticity, and partly from the effect of atmospheric pressure, when the osseous parietes of the thorax are removed; we now inflate it by a pipe introduced through the trachea; the lung gradually expands, as you see, and even now passes beyond the limits of the chest; but when we relieve the trachea from pressure, and leave an exit to the air, the lung gradually returns upon itself, contracts visibly, and expels the whole, or nearly the whole, of its contents.

The contraction in the present instance is not so complete as it should have been, and I am glad that such is the fact, as it gives me the opportunity of making a remark of much practical importance. In the present case the contraction of the lung was imperfectly exhibited, because the air was introduced too rapidly, and in too great quantity, into the delicate cells in which the ultimate branches of the bronchial tubes terminate; by this means the air-cells were distended suddenly, and beyond measure, and their elasticity in part destroyed; hence, when you are called upon to administer aid to a new-born child in a state of asphyxia, either from protracted labour, or any other cause, be particularly on your guard not to inflate the lungs too violently, as many attendants and midwives are in the habit

of doing, or you will run the greatest risk of destroying the little patient by annihilating the elastic property of the lung, and rendering the organ totally unfit for the purposes of respiration.

The experiment which you have just seen, simple and familiar as it was, nevertheless exhibited in a perfect manner the elasticity of the lung, which permitted itself to be distended nearly to ten times its original bulk, and then subsided as soon as the dilating force ceased to act. This return of the organ from a state of extreme enlargement to its primitive volume, has been termed by physiologists "contraction;" but I would again and again warn you against falling into the error of connecting this change of bulk and form in any way with a muscular power, for, as you have just seen, it is exhibited by the lung of a dead animal, and is solely to be attributed to the physical properties of the tissue.

In order that the functions of the lung should be carried on in a perfect and complete manner, its elasticity must exist in a high degree. When this is not the case the natural phenomena become altered, and the breathing is troubled by the change which has taken place in the physical condition of the organ; hence you can understand why a very small modification of the component tissues, or the presence of a foreign body acting mechanically, and preventing the development of this elasticity, must be attended with great inconvenience, if not danger, to the patient, by interrupting the due exercise of so important a function. Thus, for example, after certain affections, or in consequence of previous inflammation, a small quantity of serum or purulent matter may be effused into the cavity of the thorax; this, at first sight, would not appear of any great consequence; the fluid effused does not exist in any considerable quantity, or exercise any direct deleterious influence on the constitution, yet an accident of this kind is always accompanied by inconvenience and derangement of the respiratory function.

The same remark applies to cases of emphysema. You have all, no doubt, been struck with the remarkable oppression and difficulty of breathing under which a patient affected with this disease labours; the whole economy is deranged and troubled; the face is flushed, and often covered with sweat, from the violent efforts of the patient to draw his breath; all the respiratory muscles are called into play, and act with ten-fold energy; and the patient remains in a constant state of agitation and distress, from the orthopnœa, which seems every moment about to terminate his life; here the dangerous symptoms arise from the circumstance of the lung having lost much of its contractile property, and also from the mechanical obstacle of the effused air, which necessarily impedes or prevents its dilatation.

There is a fact, of the truth of which I have been convinced by experience, and which you will have great difficulty in explaining, without a reference to this fundamental property of the lung. It is this: you have a patient, perhaps, whose respiration is from time to time troubled; he experiences occasionally a difficulty of breathing, for which you in vain seek the cause; you examine his chest, and find the respiratory sound healthy; there is no râle, no souffle; the sound on percussion is clear and good; the patient dies, and on dissection you do not discover any organic disease or morbid change of structure to account for the symptoms; the pulmonary tissue is free from induration; there is no trace of inflammation, or tubercular deposit, &c.; the organ in short appears healthy. But if, instead of confining your inquiry to changes which depend on a supposed vital action, you examine the physical properties of the air-cells, you will find that their elasticity has been considerably modified or completely lost, and you will arrive at a satisfactory explanation of the phenomena which presented themselves during life.

Let us now turn to some natural appearances in the dead body, which depend also upon the elastic property of the respiratory organ. There is not one of you, without doubt, who has not been present at the examination of the dead subject, if you have not examined or dissected it yourselves, and who is not, consequently, familiar with the external form and situation of the large muscle dividing the abdominal from the thoracic cavity; you know, in short, that the diaphragm constitutes an arch over the superior part of the abdomen, and that it presents a hollow concave surface below, while its upper or convex one projects into the cavity of the thorax. Now the concave appearance of the diaphragm depends exclusively on the elasticity of the lung. During life, when inspiration and expiration go on regularly, the lung has a constant tendency to return upon itself, to expel the air contained in it, and to occupy a smaller space than the osseous cavity in which it is enclosed; hence, during expiration, it must exercise a kind of traction on all the surrounding parts; and as the diaphragm is very moveable, it mounts into the thorax, and forms the arch of which we speak, in consequence of the tractive force.

A similar phenomenon is witnessed after

death, when the diaphragm preserves constantly its concave form, because the contractility of the lung and the traction depending thereon are permanent. That this is the case may be readily proved by a very simple experiment, which I shall now proceed to show you, as it establishes in a clear manner this influence of the lung on the form of the diaphragm. I will open the thorax of an animal, and you will see how the muscle loses at once its natural shape and concave form, becoming loose, and floating in the abdomen, because the admission of air into the chest prevents the lung from exercising any longer its tractive action on the surrounding parts.

Having established this point, I shall now endeavour to show you the reciprocal action of the diaphragm and lung in a living animal, and to give a good view of the manner in which the muscle follows the contraction of the organ by ascending into the thorax, applying itself against the costal parietes, and occupying the space filled by the lung during inspiration. We have here exposed the left side of the chest and abdomen of this rabbit, by removing all the integuments and muscles, but without injuring the peritoneum. You can now see, very well marked, an alternate ascent and descent of a yellow-coloured body. This is the liver, which corresponds in all its motions with the elevation and depression of the diaphragm, from the intimate manner in which it is connected with that organ by its different ligaments and vessels. Without, therefore, exactly seeing the diaphragm itself, you have here a good idea of its motion, and see with what perfect regularity it ascends and descends according to the respirations of the animal; indeed, this alternate motion of the liver is so uniform and regular, that we might be tempted to attribute it solely to a vital power; but, on consideration, we must admit at least as much of physical as vital action. In its origin it is certainly physical, for it is produced by the united force of the inspiratory muscles and the diaphragm. The intercostal muscles and diaphragm, for example, contract, the air fills the cavity of the chest, the diaphragm descends, and with it the liver; after this the expiratory muscles come into play to expel the contained air, diminish the capacity of the chest, and favour the ascent of the diaphragm and parts connected with it.

But these muscles are much less powerful than those which are subservient to inspiration, and, moreover, they are not absolutely necessary for the performance of the act. We all know that the last act of a person on his death-bed is expiration; here at least the phenomenon is not muscular, but physical; and I am inclined to think that during life, and under ordinary circumstances, the same thing takes place. Examine the construction of the chest, and you will find various physical powers arranged so as to favour the contraction of the cavity, and the consequent expulsion of the air contained in the lungs. Thus the extremities of all the ribs are furnished with a portion of highly elastic cartilage, which constantly reacts against any distending force, and endeavours to restore the thorax to its normal dimensions, but the chief agent by which the air is removed is the elastic property of the lung itself. This tendency of the organ to return to its original form is certainly the most important cause of expiration, and hence to be efficacious it must exist in a very high degree.

If I make an opening into the chest of a dead subject, as, for example, the fœtus lying before me, the lung immediately subsides, and the diaphragm is pushed down into the abdominal cavity; the reason of this has been already explained to you; but although I now have opened the thorax, the phenomena are not exhibited in a striking manner, because the child, as it would appear, has never breathed, and, besides this, the elasticity of the lungs has been destroyed by frequent and too violent insufflation; in our rabbit, however, you have an opportunity of observing well the ascent and descent of the diaphragm, and if I open one side of its chest, the lung contracts at once, and the correspondence of motion between the muscle and lung is either destroyed or considerably modified; an incision has been made into the left side of the thorax, and you see now how little the liver is acted upon; it exhibits an appearance of motion, but very feebly, and this is produced by the other side of the chest which remains sound. Here, then, in destroying or neutralizing the elasticity of the lung, we have destroyed its influence on the great muscle of inspiration, and this is an accident to which man is subject from a variety of circumstances; a thrust of a sword or a bayonet, a sabre-cut, &c. may open his chest, and bring on all the inconveniences which attend a wound of this kind.

The few experiments which you have just now witnessed are enough, Gentlemen, to give you some idea of the utility of this elastic property of the lungs; by it the diaphragm is constantly preserved in a proper form, corresponding with its reciprocal connexion with the organ, and we may say in general that whatever acts injuriously on this property is calculated

either to disturb the function of respiration, or to bring on death. No matter whether the exciting cause be accidental or pathological, when the elasticity of the pulmonary tissue suffers any diminution, the whole economy is affected, and the patient labours under various distressing inconveniences.

This change in the physical condition of the respiratory system may arise from many and different causes; thus, for example, in the course of violent muscular efforts, the pulmonary tissue is powerfully acted on by the contained air, the glottis being shut: it yields, gives way, and the patient suddenly becomes emphysematous; now it is not the mere circumstance of the extravasation of an innocent fluid, like air, which constitutes the danger in cases of emphysema; it depends on a different circumstance, viz. the loss of elasticity which the lung has suffered, and which makes the great difference between an organ affected with the disease and a healthy one. We often find the pulmonary system of man and animals in this condition; that is, presenting a modification of elasticity produced by some morbid affection of the tissue, or perhaps by over exercise of the function peculiar to it. Thus the disease in horses, called broken-wind, undoubtedly depends on some modification of this kind.

The question of the true nature of this complaint has been long debated amongst veterinary surgeons, and various opinions have been from time to time adopted; but if you examine with attention the lung of an animal who has died while labouring under the disease, and direct your researches to the physical state of the air-cells, you will find that the lung, though in appearance sound, and free from any trace of morbid deposit or inflammatory change &c., has lost a great part of its elasticity, and cannot, consequently, contract with sufficient energy for the purposes of complete respiration. Indeed, an analysis of the symptoms during life might lead you to suspect some change of this nature. If you watch the horse while breathing, and take an exact account of the state of his respiration, you will soon observe that his chest expands fully, and that he has no difficulty in filling the lungs with air; inspiration is, therefore, free, but all his efforts are necessary to expel the air contained in the pulmonary cells. Here lies the essence of the disease; the cause of his laborious and difficult respiration, and the impossibility of renewing the air in sufficient quantity, or, in other words, of expiring freely, depends on the altered contractility of the tissue of the organ, which being as I said a mere modification of a physical property, does not leave behind it any morbid phenomenon, although it may and does produce during life excessive functional disorder. It is for this reason, also, that the animal's general health does not suffer much in this disease, whereas, if the same difficulty of breathing were connected with an organic change of the pulmonary tissue, he could not long survive its consequences. You must all have remarked, that broken-winded horses are often strong, vigorous, and otherwise healthy; and when the lung, under proper treatment aided by rest, recovers, as it sometimes does, in a partial manner, its elasticity, the animal may live for an indefinite period, capable of performing every work which does not require great effort or speed of motion. In man we often witness the same symptoms of disordered function arising from precisely the same cause. Thus, during the course of violent and long-continued muscular efforts, the air-cells of the lungs are distended beyond measure, and lose for a time the elasticity so necessary for the due performance of their function. When this alteration is not carried too far, the tissue recovers its physical property, by repose, quiet, &c. Under a more severe form, it gives rise to emphysema.

Here, Gentlemen, I can see no trace of vital phenomena. What, I should like to ask, is there vital in the production of emphysema? You have an elastic membrane overstrained, and, according to the laws of physics, this must of necessity modify or destroy the elasticity, according to the degree of force employed. You have, I again say, a mere physical change, and this may even go so far as to become mechanical from being physical, and produce a cavity in the substance of the lung, from the violence with which the air escapes from the cells.

In illustrating the utility and high importance of this property to the function of respiration, I said, that if, from any cause, or accident, the elasticity of the pulmonary tissue were to be suddenly arrested, the animal immediately dies. This is an instructive, as well as a curious experiment, and I shall now proceed to perform it before you. Here is a rabbit; we will open the animal's trachea, and force in a quantity of air through this pipe into the lungs, when you will soon witness the effect produced. It is unnecessary to remind you, that the simple presence of air in the pulmonary cells cannot be the cause of death, for air is the fluid naturally applied at all times to the surface of the lung, and cannot give rise to any morbid, much less fatal consequences. It is not, then, the nature of the substance intro-

duced, but the manner of introduction, which is injurious. During health, and in normal respiration, the atmospheric air enters the trachea in a slow and regular manner; it is gradually distributed by the bronchial tubes throughout the lungs, which are thus distended by degrees, without undergoing any sudden or violent change of form; but in our experiment these conditions will be reversed; a large body of air is forcibly driven into the cells, the alteration of capacity is sudden instead of being gradual, their elasticity is thus destroyed, and death is the consequence. I now blow, as you see, a small quantity of air into the trachea; the effect is not very manifest, because the mass of air is too inconsiderable to produce any great change on the pulmonary surface. I have now blown with greater violence and for a longer time, and you witness at once the deleterious effects which are produced; the animal has fallen down in a state of extreme weakness, as if he were poisoned. The motion of his nostrils and sides indicates how he suffers from a difficulty of respiration, and in a few minutes will die. The phenomena we see here, call to my recollection a story told by M. Le Roy d'Etiolle of a medical student, who, while playing with his mistress and embracing her, amused himself by blowing into her mouth. I do not know why he gave way to this species of badinage, but the sport nearly terminated fatally, from the introduction of the lover's breath in too great quantity. We shall now open the chest of the rabbit, in order to examine the state of the lung, and see what effect has been there produced by the air: the external appearance and intimate structure have not been altered, but remark how the lung is sunk in the cavity of the chest, like one that has been compressed by a purulent effusion in the pleura; it does not, in fact, fill one half of the thorax, and must, therefore, have been suddenly deprived of the power to carry on its functions in a manner sufficient for the support of life.

There are various other causes, Gentlemen, by which the elasticity of the lung may be modified, so as to give rise to symptoms of a distressing nature; thus, when, from some peculiar constitutional diathesis, an elementary part of the lung is deposited in the substance of the organ, as in the case of tubercular matter being laid down, or in œdema of the lung, which is so frequent a consequence of disease of the heart or great vessels immediately springing from it, we have a modification of the elastic property, and more or less difficulty of respiration. In pneumonia, also, where a portion of the constituent ingredients of the blood is deposited throughout the parenchymatous tissue, rendering it hard and solid, and, consequently, neutralizing the elastic power of the air-cells and pulmonary substance in general, you have a rapid, oppressed, or difficult respiration, according to the degree of change, and when this latter is in any way extensive, death very soon arrives.

It is now time, Gentlemen, to close these observations, the object of which has been to show you how important it is to study elasticity as connected with the function and disordered action of the pulmonary system. During the whole course of our lectures, we were not once compelled to have recourse to vital action, nor had we occasion in our experiments to witness the development of any vital property. From beginning to end we were content with a reference to physical conditions, and these were found to explain, in a perfect manner, various phenomena of respiration, or to account for many morbid symptoms, which are inexplicable under any other theory. Finally, we applied ourselves, and I hope with success, to convince you that the changes produced in the cellular arrangement of the lungs during respiration, depend merely on a physical property, and that here, as in the arterial system, we find neither an active vital contraction, nor a vital expansion.

UNIVERSITY OF LONDON.

CLINICAL LECTURES

DELIVERED AT THE

NORTH LONDON HOSPITAL,

BY

A. T. THOMSON, M.D.,

Physician to the Hospital, and Professor of Materia Medica in the University.

LECTURE IV.

Sudden Jaundice.—*Action of Remedies directed to the Duodenum.*

Gentlemen,—Amongst the cases which have been taken in since our last meeting, is one of jaundice, in the person of Thomas Daly, a tailor, aged thirty-five, of a melancholic temperament, who was admitted on the 27th of last month. He says that about four years since, he had an abscess in the liver, which was opened and cured in *St. Thomas's Hospital.* That since that circumstance he has never long con-

tinued well, having had a fever about a year ago. He adds, that last spring his general health became impaired, and the jaundice made its appearance early in June. The following is the report on his admission. The whole of the skin, the sclerotic coat of the eyes, and the nails, are deeply suffused with yellow; the tongue is natural and moist; the appetite is very variable, with a slight bitter taste in the mouth; and, after taking food, he has a sensation of fulness at the epigastrium. The urine is abundant, and of a deep mahogany-orange hue; the bowels are never opened without the aid of medicine, and the stools are of a pale clay colour and adhesive. The pulse is 64; he sleeps well. He has been under medical treatment nearly the whole of the time since the appearance of the jaundice. I need scarcely remark, Gentlemen, that no disease is so readily recognised as jaundice, the yellow colour of the skin, the pale stools, and the deep-coloured urine, at once distinguish it from every other morbid state of the body. Our chief attention, therefore, is required to ascertain, not the disease, but, if possible, —1st, The circumstances that may have predisposed the system to the attack; 2nd, The nature of the obstruction to the flow of the bile into the duodenum; and, 3rd, from the knowledge which we may acquire of these, To determine how far the disease admits of a cure.

1. In the instance before us, something is due to the temperament, which is melancholic; to the sedentary occupation of the patient, who is a tailor; and to the previous deranged condition of the hepatic organ in predisposing to jaundice. I cannot ascertain that our patient is a man of intemperate habits, nor, indeed, do any other circumstances throw the least light upon this part of our inquiry.

2. With respect to the nature of the cause of the obstruction to the flow of the bile into the duodenum, the complete absence of pain sets aside any idea of a biliary calculus having passed into and blocked up the common duct, for when that occurs, the accession is sudden, and the pain so acute, and generally accompanied by so much vomiting, that it cannot be overlooked by the patient. I have seen jaundice, however, occur from inspissated bile plugging up the common duct, and branching into both the cystic and the hepatic ducts, without any accompanying pain; but in such cases, which generally occur in persons suffering from long-continued depression of spirits, the disease is progressive in its appearance and the characteristic colour of the skin undergoes many shades of deepening before it can be said to be actually that of jaundice. Now this was not, so far as I can learn the progress of the case before us.

From the previous disease of the liver, it would not have been extraordinary had the jaundice arisen from some organic affection of that organ, interrupting the egress of the bile; and, in such a condition of the liver, pain, at least acute pain, is not a necessary accompaniment. But here, also, the approach of the jaundice is gradual, which, in our patient, was not the case; and that the obstruction did not depend on any adherent state of the sides of the ducts, or an obliteration of them, is equally evident from the rapid progress which the patient is making towards recovery; for when obliteration occurs, I need scarcely remark that the disease is generally incurable. On the most careful examination, I have no hesitation in assuring you that there is no obvious pressure upon the common duct from any enlarged contiguous viscus, nor any distention of the colon from impacted fæces, nor have I less hesitation in asserting, that both the pylorus and the head of the pancreas are free from disease in the instance under consideration.

In these conditions of the orifice of the stomach, and of the pancreas, more especially if the disease be of a scirrhous nature, we generally observe that the mind is in a state of great depression, and the body much emaciated, independent of pain and occasional vomiting, which are always more or less present. Indeed, as far as regards the pylorus, it is not difficult to distinguish the enlargement by an external examination. If none of these causes form the biliary obstruction in our patient, to what, it may be demanded, are we to ascribe it? I am of opinion that certain chronic morbid conditions of the duodenum exist, in which a torpid state of the biliary ducts is induced, and that under such circumstances the bile is retained in them until it acquires a degree of thickness sufficient to obstruct the egress into the gut of that of a thinner and more recent description; nevertheless, that the inspissation never extends to that degree of hardness which furnishes the cause of more permanent jaundice. It is not improbable, also, that in a low or subacute inflammatory state of the duodenum, a film of firm viscid mucus, or even an adventitious membrane, may form on its surface, and become an obstacle to the flow of the bile into the gut. Now, in either case, the treatment would be the same, our object being either to stimulate the orifices of the gall-duct in the duodenum, and thus communicate to the whole of the hepatic ducts a new impulse and more energetic action; or, by exciting a

new action in the duodenum itself, to produce the separation of any viscid mucus or membrane formed there, and thus set free the bile. In the present instance, the latter is the view which I have taken of the obstruction on which the jaundice depends, and the treatment adopted has been founded upon it. The following pills and mixture were ordered on the day of his admission, and they have not been changed:—

℞ *Pilulæ Hydrargyri* gr. iv.; *Taraxaci Extracti* gr. x. Fiant pilulæ iij h. s. quotidie sumendæ.

℞ *Sodæ Subcarbonatis* ℥j; *Aloes Decocti* f. ʒvi. M. Sumatur 4ta pars mane et vespere quotidie.

I may be asked what effect I anticipated from the taraxicum. I confess that it was ordered rather upon the authority of others, than on any observation of its salutary mode of action which I have had the opportunity of making. Dr. Pemberton affirms, that he has seen it productive of great advantage in chronic inflammation and incipient scirrhus of the liver; and, if this were true, it was more likely to be useful where diseased action existed in the duodenum. The soda and aloes were intended partly to supply the absence of the bile in the alimentary canal, and partly, by stimulating the duodenum in its passage through it, to aid the separation of any viscid mucus, or any adventitious membrane existing there. Now, Gentlemen, I do not call upon you to adopt either of the opinions which I have advanced, but from the beneficial result of the practice in this case (of which you are adequate judges); and when I inform you that I have seen this mode of treating jaundice, followed by the same benefit in a hundred instances, where the disease came on rather suddenly, and was unattended by pain or any indication of acute inflammation, but accompanied by a torpid state of the bowels; I have sufficient reason for recommending it to your notice.

I have only further to point out for your observation in this patient the powerful influence which the removal of the bile from the circulation has had in rousing the spirits of the sufferer. He now looks animated and lively, and seems as if an oppressive load had been removed from his mind. In what manner can we explain this, unless we admit that that secretion cannot be taken into the blood, without acting powerfully as a sedative poison in the nervous system, and, consequently, causing great depression of spirits? Whether, if no secretion of bile were to take place, the retention of the components of the bile in the blood would cause a similar depression of the nervous energy, it is impossible to say; but certainly no jaundice would be the consequence of such a retention; and as the bile must be first formed, and then again carried into the circulation before that disease can occur, we may also infer that the mental depression depending on the reabsorption of bile, would not follow the defect of its secretion from the blood.

TYPHUS FEVER.

The next case, which is also now in a state of convalescence, is one of typhus fever. The name of the patient is Eliza Scott, a girl fifteen years of age, who was admitted on the 27th of November. When she was taken into the hospital, although the general symptoms were favourable, yet some were indicative of great hazard, and the disease had attained its low stage. She complained of severe but not acute pain of the head, great restlessness and wakefulness; the pulse was 128, soft and compressible; the tongue was covered in the centre with a dry, harsh, brown fur, but it was moist at the edges; the teeth were covered with sordes; the abdomen was not tense; the bowels acted naturally, and the urine was not defective. The catamenia had not yet appeared. There was not delirium sufficient to denote much cerebral disturbance; but the eyes were suffused, and the patient had a fixed stupid stare, from which she was not readily roused. She was ordered a pill containing one grain of *calomel*, and two grains of true *James's Powder*, to be taken every third hour, and washed down with three tablespoonfuls of a mixture consisting of three fluid ounces of *liquor ammoniæ acetatis*, and four of *camphor mixture*. The window of the small ward, in which she was placed, was ordered to be kept open, and a chlorine fumigation to be placed in the ward.

Little or no change of symptoms occurred for three subsequent days, but on the third day, Dec. 1st, the pain of the head was much increased; and she complained of some degree of tenderness of the abdomen, but it was still free from tension. She had been purged, and passed involuntary stools; on which account, the apothecary discontinued the use of the pills. The pulse was sharp, and 120; the state of the tongue and the teeth was little altered. She had been slightly delirious in the night; the skin was hot, dry, and pungent; the head was hot and the cheeks deeply flushed; the head was ordered to be shaved and kept moist with an evaporat-

ing lotion; the body to be sponged with tepid water, and the patient was directed to resume the use of the pills and the mixture. In this manner the disease proceeded, with little or no variation of symptoms, until the 4th instant; when the most marked improvement became obvious. She had passed a more comfortable night, and obtained some quiet rest; the brown fur had left the tongue, which was, nevertheless, still dry; the teeth were cleaner, and the influence of the mercury was beginning to display itself on the gums. The bowels had been again purged; and the skin, although a slight degree of moisture had appeared on it during the night, was still hot and dry. The pulse continued above 100. The report on the 6th mentions a progressive improvement; she sleeps well; the countenance is natural, and no longer flushed; she says that she feels like herself again. She has had no motion for forty hours. She was directed to take half an ounce of castor oil directly; and, after its operation, to continue the use of the pills and the mixture; but to extend the time to six hours. The gums were evidently affected by the mercury.

On the 8th she complained of having had a bad night, owing to the cough, which has all along been present, having been more than usually troublesome. The bowels were still costive, and the skin was again hot and dry, but the tongue was clean, moist, and of a natural colour. The pulse was 96, but extremely feeble. She was ordered to take a black draught, to clear the bowels, and, after its operation, to commence the use of the following mixture:—

℞ *Muriatici Acidi Diluti* f. ℥j; *Cinchonæ Infusi* f. ℥ viij. M. Sumantur cochlearea iij, majora 3tia quâque horâ.

The subsequent reports up to this time are more and more favourable; and the patient is in a state of convalescence.

Now, Gentlemen, I regard this as a highly instructive case. The symptoms which peculiarly indicated danger were those connected with the condition of the cerebrum, namely, the severe, deep-seated pain of the head; the fixed, stupid gaze of the patient; the suffusion of the eyes; the rapid, occasionally intermittent pulse, and the involuntary stools. The state of the tongue, also, which pointed out the very deranged condition of the abdominal secretions, was unfavourable; yet the slight degree of tenderness of the abdomen on pressure was rather a favourable symptom, and to be expected from the limited degree of the sensorial disturbance, which, assuredly, throughout, threw a ray of hope upon the prognosis. When the brain is much affected, the patient is seldom sensible of pain in the abdomen, even where ulceration occurs, and perforation is the consequence.

It may be asked, whether, in this case, any thing like crisis accompanied the favourable change? Nothing critical was displayed either in the action of the skin or the kidneys. The diarrhœa which supervened could scarcely be regarded as critical; it had existed, to a certain extent, throughout the disease, and it subsided as the irritation gave way to the influence of the mercury. You will have remarked, that I attached little importance to its increase; and renewed the use of the pills, which had been discontinued on this account. Under all circumstances, moderate diarrhœa is never to be suddenly checked; it is only when it is accompanied by abdominal tension and great emaciation, that there is reason for suspecting inflammation of the mucous membrane and other intestinal lesions; in which case it certainly not only tends to retard recovery, but indicates danger.

I need scarcely remark, that the prognosis in typhus is always to be pronounced with caution; and if the records of the *Fever Hospital* are to be confided in, our patient is at that period of life in which the average mortality from fever is greatest. In a table published in the *Cyclopædia of Practical Medicine*, containing a comparative view of the mortality of 500 cases of fever at different ages, I find that between fifteen and twenty years of age, the number of deaths is 118; whereas the highest number at any other period of life does not exceed eighty-four. It is not easy to account for the greater mortality at this age, unless we suppose that, as the growth of the body is not then completed, the nervous system is more susceptible of disturbance; and we know that the condition of this part of our frame is that which must always, more than any other, influence our prognosis. But when other symptoms are favourable, age ought to influence you little in pronouncing a prognosis. So far as the pulse was concerned, the frequency at first, namely 120, although it was soft and compressible, was not a favourable symptom; but when it fell below 110, and did not exceed that number of beats in any part of the day, it afforded one reason for taking a favourable view of the result of the case, especially as the cerebral symptoms were moderate, and the patient enjoyed intervals of refreshing sleep. In drawing our inferences from the condition of the tongue, the gradual change from the dry, harsh,

brown coating of the organ, to cleanness and moisture, with an abatement of thirst, and a decrease of the parched state of the skin, these latter were sufficient to raise the most favourable anticipations. The only other favourable indication, in the present instance, is one to which I have already alluded, and which, although it is readily recognised by the experienced, yet is extremely difficult to describe. I refer to the expression of the countenance, which I took several opportunities of pointing out at the bed-side;-and, in our patient, it was remarkably striking. From being vacant and contracted, the countenance became natural and open, in the direct ratio of the progress towards convalescence; indeed, in every instance, you will observe that one of the first indications of amendment in fever, is an improvement in the expression of the countenance.

I should be guilty of wasting your time were I to enter, in this place, into any discussions respecting the causes of fever: but, as I evidently expressed my tacit belief of its contagious nature, by ordering a fumigation, it may be necessary to make a few brief remarks upon this subject. I have no arguments to offer in favour of my belief of the contagious nature of typhus: it could not be proved by arguments, however ingenious; and, therefore, we must look to facts, which leave us no room for doubt. Now, as the virus of typhus is conveyed to healthy persons through the medium of the air, as well as by the contact of the body of the diseased person, there can be no doubt that it must consist of something soluble in the air, of a chemical nature, that may be altered in its character by other chemical agencies; and thence, being no longer the same substance, its powers will necessarily be changed, or wholly destroyed. If we, therefore, suppose that the virus of typhus is of an ammoniacal nature, and contains sulphuretted hydrogen, which is not at all improbable, seeing that it emanates from bodies in a low state of vitality, we can readily explain the manner in which chlorine may so alter its character as to destroy altogether its powers. But I dread, gentlemen, to pursue these remarks farther; and, therefore, I leave them rather as an exercise for your minds, than as involving doctrines which I am anxious that you should adopt.

With respect to the treatment of the case under consideration, the chief circumstance which you have to notice is the little that was done; and here I cannot avoid quoting a frequent and excellent remark of one of the professors whose name long upheld the reputation of the University of Edinburgh, and under whom the reflection of having been a student is a source of high gratification to me; I mean Dr. GREGORY, the distinguished author of the "Conspectus Medicinæ," who used to impress this fact upon the minds of his pupils—"that the chief object of a practitioner, in the treatment of fever, is merely to obviate the tendency to death." It is, certainly, an undoubted fact that a fever which has run on beyond the first day or two, cannot be extinguished; and, consequently, all that can be attempted is the palliation of urgent symptoms. In our case, the disease had run on beyond that period in which blood-letting, purging, or depletion of any kind, was admissible before we saw it. The only indications, then, requiring to be fulfilled by active medicines, were, the improvement of the secretions, and the moderation of the heat of the body; the others demanded merely attention to the preservation of quiet, the administration of diluents, ventilation, and cleanliness, both in reference to the body of the patient, to clothing, and coverings. For answering the first of these indications, mercurials at once presented themselves; and, in our patient, the state of the tongue and of the teeth pointed out the absolute necessity for their employment; whilst nothing, on the other hand, was present to forbid their administration. In prescribing mercurials, it is not necessary to push them to the extent of inducing ptyalism, a mild action on the gums being all that is requisite; and, when this occurs, we generally find that the tongue cleans, the foul state of the teeth disappears, and the febrile symptoms generally abate. Any one of the mercurial preparations of a mild kind may be selected; and it may be given, either alone, or, as in the case before us, in combination with James's Powder. If it excite much visceral irritation, it may be combined with opium. In our patient, the influence of the calomel on the habit was soon obvious; and this is always to be regarded as a favourable symptom.

There is no part of the treatment of continued fever which requires more nice discrimination than the administration of tonics. In general, too little attention has been paid to the distinction between tone and stimulus; the former operates exclusively, at first, on the nervous system, without any evident phenomena of immediate vascular excitement; the latter increases the action of the heart and arteries, and by the augmentation of the arterial blood in the brain, excites powerfully the sensorium: the former gives strength, the latter merely calls it forth; and, as action is the result, and action

exhausts, it is not difficult to see the distinct manner in which these two sets of remedial agents operate in fever. Bark is one of those substances which experience has proved to be purely tonic; and, where debility is the chief symptom to be combated, there can be no doubt of the propriety of its administration in typhus, even at an earlier period than that at which it was ordered for our patient. In this case, however, there was no necessity for increasing the vascular action; strength alone was desired, and, therefore, no stimulant was ordered in combination with the bark. Had wine been administered, the action which we had all along been endeavouring to repress, might have been again awakened: but, by ordering a pure tonic, the new and more healthy action communicated to the arterial capillaries by the mercurial was expected to be maintained, and, by affording general tone, the irritability of the nervous system to be so subdued, as to prevent a recurrence of the morbid action which had previously existed, and constituted the disease. Mercury, by entering the circulation, and stimulating the capillaries, and restoring their healthy action, operates, in some degree, as a tonic: but mercury continued beyond a certain point may itself set up inflammation; thence it is requisite to change the tonic; and, in all cases where no visceral obstructions exist, we cannot err in having recourse to bark, the sulphate of quinia, and the mineral acids. But in the termination of typhus, stimulants are often required in conjunction with tonics; as, for example, in cases of sudden collapse, protracted diarrhœa, or hemorrhagic tendencies: in such cases undoubtedly wine is salutary in rousing the exhausted powers of the patient; and, consequently, in promoting convalescence in particular cases; but in the instance before us it is certainly unnecessary. In conclusion, I have only a few words to offer you on the management of convalescence from fever: for often, at this period, the patient is in more actual danger than during the continuance of the disease. Finding himself free from fever, he is apt to take liberties both as to diet and regimen; and, consequently, when relapse takes place, the strength of the patient sinks under the renewal of the disease, and he falls the victim of his own imprudence. For many days he should not sit up so long as to cause a feeling of fatigue, and there is much danger in attempting too early to walk. I have seen great mischief result from returning to the use of animal food too soon. At least ten days should elapse after all symptoms of fever are gone.

CLINICAL OBSERVATIONS.

ON

VARIOUS DISEASES,

BY

MR. WARDROP.

ON THE TREATMENT OF GONORRHŒA.

GREAT advantage may be derived in the practice of medicine, from tracing analogies in the natural structure of different organs. If successful modes of treating the diseases of any particular texture of an organ have been discovered, it is reasonable to expect that a similar treatment will be equally efficacious when employed in the same disease affecting the like texture in another part of the body. This is illustrated by the remarks I am about to make on the diseases of mucous membranes. I shall take a future opportunity, when speaking of the purulent ophthalmia, to point out the strict analogy which subsists between that disease and gonorrhœa. It may now be sufficient to observe that these two diseases are seated in a texture or membrane which has the same anatomical characters, and performs the same function in each organ,—that they are attended by a series of similar symptoms—a difference arising only in one class of the symptoms, in consequence of a difference existing in the organs to which the mucous membrane belongs. In both inflammations there is increased redness, swelling, a profuse puriform discharge, and sometimes symptomatic fever. When the mucous membrane of the eye, or the conjunctiva, is affected, pain on exposure to light, an increased flow of tears, and violent pain in the head, are superadded; while, if the inflammation affects the urethra, the pain is aggravated by micturition, and varies in degree according to the acrimony of that excretion.

The similarity in the natural structure of the textures affected in these two diseases would lead us to expect that the general system of treatment applicable to the one inflammation would be equally beneficial in the other, and reasoning in this manner I have successfully adopted a system of treatment in gonorrhœa, which has been very successfully pursued in the treatment of puriform ophthalmia.

In the puriform ophthalmia a variety of local applications had been used, the severity of the disease calling for the employment of every means that could be devised, and its unfortunate frequency in

this country at one period, gave most extensive opportunities of trying the effects of a variety of remedies.

Though the success of the different local applications may not have been uniform, yet many of them, and those of very opposite properties, in their turn met with zealous advocates; and within the sphere of my own practice I have been enabled to ascertain the accuracy of their observations, having adopted, in cases which were, as far as could be ascertained, perfectly similar, different local remedies, all of which were followed by nearly similar results. This led me to consider how far *local* applications might really be useful at all, and to make the experiment of allowing the local complaint to proceed unmolested, merely taking care to diminish any febrile state of the system which might exist, by an antiphlogistic plan of treatment. Under this system of management, I found that the inflammation of the eyes ceased, perhaps more uniformly and progressively than in those cases in which local applications had been employed. Besides, I observed that in none of the cases where such a mode of treatment was followed, did the disease assume that chronic and very unmanageable form which was so common when local applications were employed.

What has now been said of the treatment of the puriform ophthalmia, applies strictly to the treatment of gonorrhœa. A variety of different local applications has been employed for the cure of gonorrhœa, to all of which equal success has been attributed. So often have these various remedies been adopted and rejected, and so often have they been found totally inefficacious, that many intelligent surgeons are in the habit of not using any local applications whatever, but allow the gonorrhœal discharge to follow its natural progress, only enjoining diluents, rest, and a low diet.

In the fourteenth volume of the *Edinburgh Medical Journal* some most satisfactory experiments are recorded by Messrs. Johnstone and Bartlett, which ought to have been considered as having settled this point. Of fifty-four soldiers who were affected with gonorrhœa, twenty were treated by injection, and were cured, on an average, in seventeen days; fifteen were treated by rest and abstinence, and cured, on an average, in eight days; nineteen were treated by internal medicines, and the average of the cure among them, by cubebs was five days, by capsicum thirteen days, and by camphor nine days.

My wish in the present observations is to show that a general antiphlogistic system of treatment, without any local applications, in the form of injections, is not only the least dangerous mode of relieving the symptoms, but by far the most effectual; and that this system may be followed to an extent beyond that which, I believe, is usually employed.

To establish the propriety of this mode of treating gonorrhœa, I must recur to the analogy of gonorrhœa with puriform ophthalmia. It is confirmed by ample experience, that a very copious general blood-letting seldom or never fails either to check the progress, or subdue the symptoms, of the puriform ophthalmia. In the most violent examples of this complaint, I have never seen a single instance where a copious bleeding from the arm, a bleeding to syncope, did not produce the most decided amendment; and in all cases where this practice has been resorted to early, I have never observed any of those tedious and often unmanageable states of chronic inflammation succeed, which are so frequent where local remedies have been employed. In some cases it has been necessary to abstract an almost incredible quantity of blood, by repeated bleedings, but, in all, the same good effects were ultimately obtained.

In many cases of gonorrhœa the symptoms are far advanced before the patient applies for medical assistance,—the penis is swelled; there is a profuse, thin, and ichorous discharge, with an admixture of blood, from the urethra; intense pain in making water; violent chordee; hot and dry skin; furred tongue; and every other symptom of general fever. Under such circumstances immediate relief will be obtained by a copious bleeding, or the abstraction of as much blood as is necessary to subdue the pulse, and, as in puriform ophthalmia, the bleeding should be repeated whenever the pulse rises, and until the febrile symptoms and the local inflammation are subdued. Since I have followed this practice, I have not seen any case so violent but that all the symptoms were removed by one copious bleeding; though I have no doubt that there are many instances in which the bleeding may be carried as far as it has often been pushed in other inflammatory diseases.

But it is not only in the *more violent* forms of gonorrhœa that I would recommend general blood-letting; great advantages will be found in having recourse to this practice whenever the local symptoms become so troublesome as to produce much tension or pain in making water, or when there are even slight febrile symptoms. In such cases the effects of blood-letting are very decisive. All the distressing symp-

toms of the disease soon vanish, and a thick puriform discharge succeeds, which gradually diminishes, and is soon completely subdued.

At the same time that the most material advantages are to be derived from general blood-letting, and that it is to be considered as indispensable, other means should be employed. Laxatives, without purging, diluents, a spare diet, and rest, ought to be enjoined; and, what I think affords the greatest benefit to all inflamed parts is, the use of fomentations and poultices. The penis and surrounding parts should be frequently fomented, and the patient should make water in a warm or hip-bath, and a poultice may be applied to the perineum at bed-time.

It may, to some, appear that local bleeding would be more suitable than general bleeding, and that a less quantity of blood, taken by leeches, might do as much good as a larger quantity taken from the arm. This, however, is not found to be the case. In the treatment of puriform ophthalmia I took some pains to ascertain whether or not a less quantity of blood taken from the temporal artery would not be as effectual in removing the local inflammation, as a large quantity taken from the arm, and I was led to conclude, that whenever the local inflammation was attended by general fever, a quantity of blood taken from a vein in the arm checked not only the febrile symptoms more speedily and completely than an equal quantity abstracted locally, but that the inflammatory symptoms also underwent a corresponding diminution. In very violent cases of ophthalmia, a combination of both these modes of abstracting blood may be useful, and local bleeding will be found particularly serviceable when local inflammation continues after the general febrile symptoms have been subdued by general blood-letting; and, perhaps, in cases of ophthalmia, not attended with any fever, local bleeding would be much more effectual than general, or at least it might be sufficient to abstract a smaller quantity. In gonorrhœa the same observations are applicable, and when there is no feverish symptom, and the local symptoms are not very severe, the application of leeches to the perineum may be more beneficial than a general depletion.

What has now been said of the treatment of gonorrhœa, and of the analogy which exists between gonorrhœa and purulent ophthalmia, has had a reference merely to the active inflammatory stage of those diseases. When they assume a chronic form, there is also the same similarity to be noticed, and the best mode of treating the one disease will be found the most appropriate in the other. In both, a variety of local remedies has been employed, and all of them have had powerful recommendations. When the puriform ophthalmia has continued for a considerable length of time, it becomes so modified or engrafted, as it were, with the general system of the individual, and is attended with such symptoms of constitutional derangement, that those symptoms must be removed before the local complaint can be alleviated; and the removal of the constitutional symptom is sometimes alone sufficient to produce an abatement, or even a total disappearance, of the local affection. In cases of gleet it also happens that the discharge from the urethra is kept up by some constitutional irritation, and when that is removed the gleet disappears. It is on this principle that I would explain the beneficial effects which are frequently obtained by the use of alteratives, such as calomel in small doses. The constitutional affection seems in general to consist of a derangement of the digestive organs, and particularly of the functions of the liver. Attention, therefore, to keep the bowels freely open, and the use of alteratives, will, in many cases of gleet, be followed by very beneficial effects. In other cases the discharge is kept up by some local irritation, which those internal medicines that have a specific influence on the urinary organs, such as the balsams, cubebs, and cantharides, appear to change or destroy. And there are also inflammations of a decidedly specific character, which affect the urethra, the characters and treatment of which I shall on a future occasion point out, more particularly those connected with rheumatism and gout.

THE

HYDRATE OF THE TRITOXIDE OF IRON

IN CASES OF POISONING BY

ARSENIC ACID, &c.

THE two following facts, which we derive from the French LANCET of Dec. 20th (communicated to the Society of Practical Medicine, by M. LEGER), seem to confirm the late allegations relative to the efficacy of the antidote to arsenic, discovered by a German physician. They are given with very few details, but, short as they are, they deserve notice:—

Fact 1.—A young child, eighteen months old, having drunk a solution of the gray oxide of cobalt (commonly called "fly-poison"), was immediately seized with violent colic. Her mother, alarmed by the sufferings of the infant, called in an apothecary, who administered on the instant the hydrate of the tritoxide of iron, a pinch, in some sugar-and-water, every quarter of an hour. When the medicine was administered the first time, the little patient was lying stiff on the lap of her grandmother, complaining of violent pain in the belly. She had vomited twice. After the administration of the first dose she was less agitated; the remedy was repeated; and after the fifth dose the patient was much relieved; she fell asleep, and did not awake until the next morning. The pain had now completely disappeared, the infant was gay, and since the period spoken of has enjoyed perfect health.

Fact 2.—Dr. Bunsun, of Göttengen, has already made some experiments on dogs, which seem to prove that arsenious acid may be neutralized by the tritoxide; and he asserts that he has found in the excrement of animals submitted to the poison and its antidote, an insoluble arseniate of iron.

In addition to these recent facts, we may mention others communicated to the *Royal Academy of Medicine*, during the months of November and December, and published in the *Gazette des Hopitaux*:—

On the 4th of November, M. Orfila communicated some experiments made on this subject by M. Lesueur, at the Faculty of Medicine. The experiments were performed on dogs, and in order to prevent the rejection of the poison by vomiting, the œsophagus was tied immediately after the administration of the arsenic and iron.

Experiment 1.—Nine grains of arsenic acid were given to a good-sized strong dog, and immediately after, three ounces two scruples of the hydro-tritoxide of iron. The œsophagus was then tied. The animal experienced no symptoms whatever of poisoning, and was alive when M. Orfila spoke, seventy hours after the administration of the poison. It is right to remark that nine grains of white arsenic, or arsenic acid, generally destroy a dog in about five or six hours. The above-mentioned experiment was repeated on several dogs, and always gave similar results.

Experiment 2.—Nine grains of arsenic acid were given to another dog; and, in half an hour after, three ounces two scruples of the antidote. This animal soon died, with all the symptoms of poisoning.

M. Orfila observed that the first experiment proved beyond doubt the efficacy of the tritoxide as an antidote to arsenic acid. The action of this poison has hitherto been combated with little success, because, as it is insoluble in water, its particles become concealed, and, as it were, incrusted, in the mucous cysts of the stomach; hence, but little advantage is obtained from the use of hydro-sulphuric acid, although it decomposes perfectly the arsenic acid. People who poison themselves with arsenic generally take it in a solid state, and it is curious to observe how, in the present case, one solid decomposes another.

The second experiment in which the animal died by no means contradicts the first, for it is now well determined that arsenic poisons not by the inflammation of the stomach which it causes, but by its action on the brain and heart after absorption; and the latter takes place so rapidly, that after half an hour the administration of the antidote is too late.

On the 9th of December, M. Orfila communicated to the Academy the experiments which he had made, in conjunction with M. Miguel and Nonat, on the same subject, and which furnished the following results:

Twenty-four grains of arsenic were given to a dog: twenty minutes afterwards four scruples of the tritoxide of iron were administered in water; the animal, who had vomited before the administration of the counter poison, remained dull, but in two days was quite well.

On the same day, a small dog was given ten grains of arsenic, and, immediately after, the tritoxide; in the afternoon the animal was perfectly healthy.

The same experiment was repeated, with exactly similar results, on three other dogs. In all these cases, the antidote was given in a dose twelve times greater than the poison.

The œsophagus of a spaniel was now tied without any poison having been given; the dog died in seventy-eight hours.

Twelve grains of arsenic were given to another spaniel; the œsophagus was tied, and he died in two hours.

Nine grains were administered to a dog: the œsophagus was tied; death occurred in two and a half hours.

Twelve grains of arsenic were given to a small dog: the tritoxide immediately after, and the œsophagus was then tied. In two or three hours the external symptoms of poisoning had disappeared: in twenty-four hours the ligature was removed from the œsophagus, and the animal died on the sixth day.

The same experiment was repeated on two bitches; one died in seventy-two hours, the other in eighty-three. In order to ascertain in what period after the administration of the poison the antidote might be given with some hope of success, the following experiments were made.

Twelve grains of arsenic were given to a middle-sized dog; the iron two hours and a half after; the animal died in a quarter of an hour.

Eighteen grains were given to a large dog; the animal made several efforts at vomiting; at the expiration of an hour the ligature of the œsophagus was loosened, and the antidote administered: the dog lived ninety hours.

Eight grains of arsenic acid were given to a dog: the iron in an hour after; death in twenty-four hours.

Twelve grains of arsenic acid, mixed up with some fat, were administered to a spaniel bitch, together with the antidote: the animal died in thirty-eight hours. Some fragments of the poison were found in the animal's stomach.

THE LANCET.

London, Saturday, Jan. 3, 1835.

Communications which we continue to receive from the remotest parts of the United Kingdom, are strongly expressive of the apprehensions that are entertained regarding the obstacles which it is possible that a Tory ministry may offer as impediments to the progress of medical reform. We can assure our correspondents, however, that we do not share in their fears. Tories may be obstinate, prejudiced, and bigoted, but they are not *blind*. New events, of daily occurrence, convey instructive lessons to the minds of all those men who believe that it is possible to retard, or even to control, the current of human improvement. Ministers may be reluctant to yield to the voice and the reasonable demands of the profession, lest the remodelling of our medical institutions should be productive of injury to "vested interests" and "long-established rights." Other causes may also concur in disinclining them from proceeding with the labours of Mr. Warburton and the Medical Committee; but the same power which will necessarily force them to popularize our municipal and other institutions, will be equally effectual in demanding a reconstruction of the government of our medical colleges and hospitals, and the statutes relative to medical practice in this country. Can the gentlemen who are alarmed at the present aspect of affairs, believe that a Tory or any other ministry, is capable of offering an effectual resistance to the influence of public opinion. Until the medical inquiry was instituted in the House of Commons, the statements that were advanced regarding the condition of medical law, education, and practice, were viewed by many influential individuals as assertions which were wholly unsustained by the existence of corroborative facts. That delusion is now dispelled: the investigation which was conducted by Mr. Warburton has brought to light such a collection of abuses, absurdities, and anomalies, connected with medical practice and education, as was never before exhibited in one branch of our national institutions. If, then, the members of the ministry be desirous of holding office, and thus retaining the reins of government in their own hands, they will defeat those very objects by resisting the claims for reform that are founded on the testimony which has been collected, and which is equally valuable for its utility and its truth.

With an ignorant and a lethargic community, amongst a people who had not tasted the agreeable fruit produced by the thriving tree of reform, a ministry might remain inactive and turn aside in apparent listlessness from every appeal for the removal of perplexing grievances. But the scientific portion of the English community are fully alive to their own interests

and those of the nation. Henceforth, the executive servants of the English crown will not be permitted to slumber in their offices, while the immense funds which have been contributed towards founding institutions for the growth of medical knowledge, and the protection of the sick poor, are perverted by interested traffickers in education and charity from their great legitimate objects. True it is, that wherever a discretionary power can be exercised by a corrupt ministry, the weight of official authority may always be directed against merit and the just claims of independent exertion; but the force of public opinion, even in these cases, constantly tends to diminish the sphere in which the founders and supporters of monopoly hold their sway.

But it happens, most fortunately for the profession and the public, that ministers, if they understand their position, can have no sound motive for retaining medical abuses; while, on the contrary, they may be essentially benefited in character and strength by their removal. In the state department of medicine, government patronage is, comparatively speaking, of no value. At any rate, it is not worth purchasing if the price to be paid for it is to amount to the rooted displeasure of the great body of the profession.

Under these circumstances, our friends in the country should inquire what a Tory or any other ministry is capable of gaining by the continuance of medical abuses, or by maintaining the integrity of such odious charters as those of the Colleges of Surgeons in London and Dublin, and that of the College in Pall-mall East. The servants of the Crown are influenced by precisely the same considerations as would be any other body of persons placed in similar circumstances. As the possession of office and power is agreeable to them, it necessarily follows that they will take those steps which are best calculated to secure their authority. It is no refutation of this argument to allege, that Tory ministers are opposed to a just, or, in other words, to a popular or democratic system of government in the medical colleges; because they will find themselves *compelled*, by the increasing knowledge of the nation, to give way under the pressure of public opinion. At the time that the Duke of WELLINGTON yielded to the demand for Catholic emancipation, can it be supposed that his Grace was, in reality, less hostile to Catholicism than at any previous moment of his life? Precisely the same question may be asked with regard to the opinions or, we might say, to the prejudices of Sir ROBERT PEEL. The increased information of the public had thrown those ministers into a new position, and they quickly discovered, with instinctive sagacity, that it was expedient for them to adopt a new system of action. Thus must it happen with medical and all other reforms.

The public are rapidly discovering the changes which it is prudent to effect, and parliament soon afterwards finds that it is of importance to yield to the declared wishes of the community. If our correspondents, or even if the advocates of Toryism, would point out to us in what respect the new ministry would gain character, or could in any manner be benefited, by perpetuating misgovernment in medical affairs, then we should be disposed to treat the question as one of a perilous tendency. When, however, it is most easily discoverable, that a ministry, whether composed of Whigs, Tories, or Radicals, could acquire character and popularity by purifying the medical institutions of the nation —by expunging from the statute-book certain odious laws which were professedly passed for the regulation of medical practice,—we cannot perceive that there is any solid ground for alarm. We cannot even guess at the reasons which would

operate with so much force on the minds of the advisers of the crown, as to induce them to covet the aversion of twenty thousand practitioners of medicine. Of course, we would not have it inferred that the appointment of a Tory ministry would *facilitate* the work of medical reform. We all know, indeed, that Tories are sticklers not only for ancient institutions, but even for the very abuses that are connected with them. Innovation has ever been a source of terror to them, excepting in those instances where the infringement of a privilege has taken a direction which has been adverse to the interests of the public. In a word, if the innovations have been calculated to benefit the self-elected few, then innovation has been tolerated by corrupt governments; but all proposals for a change which has had a tendency to benefit, or to throw power into the hands of, the many, up to the passing of the Reform Act, were pertinaciously and successfully resisted by Tory ministers. But now that the voice of an intelligent community has been heard with attention,—because it produced some threatening echoes within the walls of Parliament,—and the House of Commons has become popularized, it would be as impossible as it is to control the wind, or to check the tide currents of the ocean, for any ministry, however corrupt, or however powerful from talent and reputation, to prevent the thinking portion of the community, from successfully demanding the purification of those institutions which were established for the benefit and protection of the public.

The cause of medical reform must, therefore, prosper. Full evidence of the defects in our medical institutions has been obtained. We are no longer left to doubt and surmise, but we have the materials wherewith to work for the correction of that which is defective, and for the establishment of whatever may be found wanting in our medical colleges and other institutions. Further, as we cannot perceive why any ministry should now desire to perpetuate the corruptions which exist in our hospitals, or the defects of our medical statutes, we know not why medical practitioners should be so seriously alarmed at the change which has lately taken place in the councils of the King. If a Tory Ministry could gain aught by resisting the just claims of the profession, that resistance we should expect; but when it is seen that all the advantages to the ministry itself lie on the side of concession, we cannot believe that any set of men, however prejudiced they may be, will make medical institutions an exception to amendments which can no longer be resisted in all the other establishments of the country. A very short time, however, will render speculation on this subject altogether useless.

The publication in this Journal of some of the clinical lectures which have been delivered by the medical officers of the *North London Hospital*,* has announced to the profession and the public that the new hospital of the London University has for some time past been open for the reception of the sick, and for the practical instruction of medical students.

A few weeks since we embraced an opportunity of personally examining this additional monument, dedicated to the conjoined purposes of charity and science by the munificence of a considerable portion of the English public, and the inspection afforded us much satisfaction. The wards

* In courtesy, we suppose, we must use the name which the founders have chosen, but it is certainly as unfortunate an one as could have been selected. The title of "North London Hospital" has led many people to believe that the institution is a branch establishment of the old *London Hospital*.

are capacious, without being too large, and the theatre and arrangements for the students are ample and effective. Already there are upwards of one hundred patients in the institution,—a greater number than was ever received at any one time into the old *Westminster Hospital*, until within the last four or five years,—and the *North London Hospital* can conveniently accommodate nearly two hundred patients.

There is one circumstance which is strikingly characteristic of this establishment. It was avowedly founded for the advancement of the science of medicine. There was no ambiguity of motive,—no *mock* pretence of charity in its projection and completion. It is, therefore, entitled to the liberal support of the public, which it will doubtless receive, under the fostering protection and recommendation of the members of the medical profession. While it is quite apparent that the directors of the hospital are benevolently inclined to furnish the utmost domestic comfort to the patients which it is possible for an eleemosynary institution to confer, it is equally evident that the welfare, the accommodation, and the improvement of the student, will, in no essential particular, be disregarded. Excellent opportunities will be afforded to the pupils of witnessing the out-practice, and of hearing clinical lectures on all the interesting cases received into the institution; and they are, we understand, to be admitted in rotation into the dispensary, in order that they may be initiated into the business of that important branch of the establishment. They will, moreover, enjoy the advantage of attending in the wards, not only when the medical officers are present, but also at any period which they may select during five or six hours of every day. At the *Middlesex*, *St. George's*, and other metropolitan institutions, the pupils have long been denied the opportunity of visiting the patients, unless in the presence of one of the medical officers. Hence,—as we have lately seen in *St. George's Hospital*, where the daily processes of visiting and prescribing have all been executed at *one o'clock* by the several medical officers,—a purchased right of the student is most unjustly withheld from him. Although he is made to pay for the opportunity of witnessing the entire practice of the hospital, the regulations of the institution, and the conduct of the medical officers, are such, that he cannot derive benefit from more than a third portion of a supposed advantage which the monopolists of the colleges and halls have authoritatively enjoined in the purchase.

But there are other advantages connected with the *North London Hospital*, far greater than any to which we have yet adverted. All the offices which are to be occupied by the pupils, are to be obtained, not in conformity with the odious system of purchase, so strictly acted on in most other establishments, but according to the merits of the candidates. Thus, the house-pupils, the clinical clerks, and the dressers, are to compete under a scheme of concours which will test the qualifications of the candidates. The office of clinical clerk, therefore, in this establishment will not cost thirty guineas. The dresser's box will not be put up at the enormous price of fifty guineas,—the office of house-pupil will not be here sold at the extravagant sum of three-score-and-ten pounds. These advantages, which are calculated to excite an unprecedented spirit and emulation amongst the pupils,—although the admission-fee paid for "perpetual" attendance on the entire practice, medical and surgical,—amount to little more than a moiety of the charge at the other metropolitan establishments; and even of the sums thus derived it should be known that the medical officers hold themselves entirely independent, not accepting from it a single shilling for their professional services.

We trust, then, that this hospital will open a new era in the practices of other establishments which are avowedly designed to accomplish similar ends. So much, however, has already been done towards making this institution what it ought to be, that as an hospital for the treatment of the sick and the instruction of the student, it is only necessary to reduce the admission-fee to about one-half of the sum now paid, and to amend the mode of electing its medical officers, in order to render it the most perfect establishment of its kind in this country.

A CURIOUS inquiry has lately been instituted under the direction of the Home Department, on an application made to Mr. GOULBURN, by a party of "eminent medical gentlemen," who have lately made a visit in that quarter from Lincoln's-Inn-Fields. The object of the application was to obtain the appointment of a commission of inquiry into the operation of the Anatomy Act, and was intended by the "eminent gentlemen," and the hospital teachers of anatomy, to lead to the possession of an unlimited control of the distribution of bodies to the various schools of the metropolis. The party succeeded in ear-wigging the Right Honourable Secretary into an appointment of just such a commission as they desired,—that is to say, one which consisted of Messrs KEATE, WHITE, TRAVERS, and LAWRENCE, and Sirs A. COOPER and B. BRODIE; and the "labours" of the "eminent" Commissioners have since been pursued at the house of Sir ASTLEY COOPER, where the whole of the metropolitan teachers of Anatomy have been summoned and "examined," with a result which tends to promote any object rather than the sinister purpose entertained by Sir B. BRODIE, the *Council of the College of Surgeons*, and Messrs. STANLEY, MAYO, and some of the other teachers of anatomy in the *larger* schools.

At present we shall not comment on, or disclose any of the details of, the proceedings in Conduit-street; but as the affair is one of great professional and public importance, we shall, as soon as the Report of the Brodie-Anatomical Commission to the Secretary of State is before us, being in possession of the authentic information respecting its origin, progress, and *end*, submit a digest of the whole to the attention of the profession.

An Inquiry into the Nature and Properties of the Blood in Health and Disease. By the late CHARLES TURNER THACKRAH. A new and enlarged edition: arranged and revised by THOS. G. WRIGHT, M.D. to which is prefixed a biographical memoir of Mr. THACKRAH. London. Longman. 1834. 8vo. pp. 246.

AFTER an interval of fourteen years or more, we have a second edition of the late Mr. THACKRAH's work on the blood. Much has been done in this long interval towards increasing our knowledge of the properties of this singular fluid. In the second edition of the work, therefore, we naturally and reasonably expected to see some account of the labours of various British and Continental physiologists incorporated and criticised. Yet there is scarcely an observation or an experiment of any importance to be found in the new edition which was not contained in the old one. Observations, indeed, and experiments there are, which have been made during this long interval, but they are desultory and unimportant, and conduct to no general principles. The best part of the first edition of the work was that which related to the cause of the coagulation of the blood. Mr. THACKRAH's experiments on this subject are good, though he has failed—as Mr. PRATER, in his work on the blood, has shown—to draw from them a legitimate inference. We believe that these experiments still constitute the best part of the new edition. We have no hesitation in saying,

that Mr. PRATER's work, which was published after Dr. STEVENS's, and which incorporates Dr. STEVENS's opinions, in some cases adopting and in some rejecting them, is, up to the present period, the most satisfactory work that has been published on the blood. The work, indeed, is defective in arrangement, and its composition is unequal; but for the disclosure of new facts, and the justice of its deductions, it has scarcely been rivalled by any work which has made its appearance either in this country or abroad. We by no means desire by this assertion to cast Mr. THACKRAH's work into the shade. It possesses many claims on our approbation, particularly (as we have already noticed) for the experiments developed in its pages in support of a physiological in opposition to a chemical theory of coagulation; but it is obvious that Mr. THACKRAH's other occupations did not leave him time to place the second edition on a level with the present state of our knowledge. Indeed, he concludes this edition with an avowal nearly to that effect, the result of a just conviction, and the expression of a candid mind:—

"I wished to do more, much I wished to do better, but the broken health which obliges me to abandon my (a hiatus here occurs) obliges me also to shorten my inquiries."—p. 246.

We propose to support the opinion we have expressed by a reference to the work itself. In page 43, we find that our author opposes the statement of ENGELHART, (who gained the prize for his essay at Gottingen in 1825,) that the red globules coagulate at a heat of 140°. Mr. PRATER, on the other hand, found ENGELHART's statement to be correct.*

In page 71 we find it stated, that caustic alkali, common salt, subcarbonate of soda, and the neutral salts in general, "retard or prevent coagulation." Now PRATER shows, clearly, that all these, in small quantities, *hasten* coagulation, and only retard and prevent it when in *large* quantities.† He also referred the operation of heat to a similar principle. He shows that a heat of 120° hastens the coagulation of the blood; *while a heat of* 140-150° *keeps the blood permanently fluid.* On examining the section "Heat" in Mr. THACKRAH's work, we do not find any notice of this very singular fact.

Speaking of the effect which abstraction of the blood has on that portion of the fluid which remains, Mr. THACKRAH says, at page 141:—

"That if blood be taken at three periods during the slaughter of an animal, the *serum will be greater in the two first than in the last*, while in this the comparative softness of the crassamentum will account for the difference; and the proportion of water ascertained by analysis, though subject to the greatest variety, seems to be less in the second vessel than in either of the others."

But neither do the experiments of Mr. THACKRAH satisfactorily bear him out in this assertion, nor is he supported in it by DAVY,* PRATER, or other authors. To be sure, we find the quantity of serum to be as great, or almost as great, in the second cup as in the third, but that does not prove its actual existence in greater quantity in it; because the coagulum in the third cup (as Mr. THACKRAH himself allows) seldom or never contracts so much as the others, and, consequently, *does not expel the serum from it.* Hence, though more serum may be expressed from the second portion than the third, the third may, nevertheless, actually contain the most. Accordingly, in Mr. THACKRAH's 183rd experiment, the serum in the second portion was 420, and in the third 418; but so trifling is this difference that we will venture to say the serum was actually in greatest quantity in the third portion. But in the same experiment the serum in the first portion was only 160!†

In the 186th experiment, the relative proportions are as striking:—

	First drawn.	Second.	Third.
Serum..	277.2	240.6	600.7

* Prater on the Blood, page 286. London: S. Highley, Fleet-street.
† Op. cit. p. 128, et passim.

* De Sanguine, Edin. 1814. Ed. Med. and Surg. Journal.
† In his Appendix, however (p. 235), he found in an experiment that the first and last portions of blood contained as nearly as possible the same proportions of water, as ascertained by drying at a sand-bath. If no error crept into this experiment, we must admit it to be an exception to a general principle. But in this experiment it is neither stated whether much blood was drawn (in which case alone we could expect an appreciable increase in the serum), nor whether the last portion produced syncope.

How, then, we may ask, is the proof afforded by Mr. THACKRAH's experiments, that "the serum will be greater in the first two than in the last?" (p. 142.) We will venture to say, from our own experiments, that it is *never* greater in the first than the last; and we doubt very much whether it ever is, in reality, greater in the second than in the last, although, as we have already observed, it may occasionally *seem* to be so. We do not, however, wish to speak with the same degree of confidence with regard to the second portion as to the first. But why need we insist on the existence of so obvious an error, when Mr. THACKRAH, himself, a little farther on (p. 144), allows that "without accumulating examples, we may safely infer that hemorrhage increases the tenuity of the blood." It seems very difficult to reconcile this assertion with the one just examined.

Now, what is Mr. THACKRAH's theory of the cause of this rapid coagulation of the blood at syncope? He ascribes it *solely* to debility. "Debility remarkably promotes concretion." (p. 140.) This was the opinion of HEWSON. Dr. ALISON in his "Outlines of Physiology,"* has, however, quoted SCHRAEDER's experiments, to show that the effect depends *solely* on the increased quantity of serum effused at the time of fainting. Mr. PRATER† repeated and extended SCHRAEDER's experiments, and admits that serum mixed with blood hastens its coagulation; but, still, he considers it "not impossible" that debility, or an influence arising from the nervous system, may increase, or occasionally cause, rapid coagulation. There seems strong reason to believe that Dr. ALISON is wrong in altogether excluding this agency, first suggested by the illustrious HEWSON; and there is not a doubt that Mr. THACKRAH committed a great error in passing over the experiments of SCHRAEDER, confirmed and extended by PRATER, in proof of the power of the most minute quantities of serum to hasten coagulation. Whether the omission is to be ascribed to deficient information or not, on the part of Mr. THACKRAH or Dr. WRIGHT, does not matter; but it certainly shows that the second edition of the work before us is by no means calculated to give the reader a correct account of our present knowledge of the properties of the blood.

It would occupy too large a portion of our limits at present to attempt to *prove*, both from Mr. THACKRAH's experiments and our own, that a weak state of the animal, or impressions on the nervous system, must have an influence in hastening the coagulation of the blood, *independently of any increase of serum*. We shall, therefore, merely state that we incline to the opinions of Messrs. HEWSON and THACKRAH in this respect, feeling assured, however, that another and a very different cause (viz. increase of serum) can also hasten the coagulation of the blood.

The appendix to the work consists principally of unconnected experiments, which the author does not seem to have prosecuted with a view to the detection of any general principle. Thus, in experiment 45 (page 238), we have blood received into urine, with the remark, that "it did not *appear* to coagulate." Either it did coagulate, or it did not. If it did coagulate, the *saline* solution (for it must be principally in virtue of its *salts*, which are well known to keep the blood fluid, that urine acts) was not strong enough to keep it permanently fluid; and if it did not coagulate, the *vice-versa* of this sentence will express the fact. Some urine is, of course, more aqueous or diluent than other. Again, in experiment 53 (p. 240), blood was received into a solution of muriate of soda, and this also "did not *appear* to coagulate." Doubt on this point could not have existed had the solution been stronger, for it certainly could not have coagulated under such circumstances. We hardly think that Mr. THACKRAH, had he lived long enough to take a more comprehensive view of these unsatisfactory experiments, would have occupied his pages with them. At all events their admission argues great ignorance of what has been effected by others in a similar line of research.

We conclude by remarking, that the editor of the work has adopted the evidently erroneous theory of RASPAIL on

* P. 52. Blackwood, Edinburgh.

† Op. cit. p. 103, et seq.

the cause of the coagulation of the blood, in preference to Mr. THACKRAH'S own theory.* We have already expressed an opinion (and we believe that it will obtain general assent), that this is the most satisfactory part of Mr. THACKRAH'S work, for if he has not drawn the exactly correct inference which is deducible from his experiments, he has done so very nearly.

FRENCH JOURNALS.

The four last numbers of the *Gazette Médicale de Paris* which have reached us contain some articles which we are induced to notice. The number published on December the 20th, is occupied entirely by a review of Kiernan on the Liver, and an Analysis of the English and Irish Medical Periodicals. The previous number contains an original article, by Dr. Larcher, entitled "Remarks on Catheterism, and on the various species of Contraction of the urethra in the female." In No. 49 there is a paper "On the employment of Sydenham's Laudanum against false Labour Pains, with a Review of the Belgian and French provincial periodicals" by G. M. Foulhioux, physician to the Hotel Dieu of Lyons, from which we shall presently make some extracts; and an original article on Organic Specialties, considered in relation to the intellectual faculties of the human body, by F. Labert, has found a place in No. 48.

OPIUM IN FALSE LABOUR PAINS.—The prejudice of the French physicians against the use of calomel and opium, is one, perhaps, of the most striking features in their practice. Hence we find M. Foulhioux recommending with timidity the use of Sydenham's opium in cases of false pain, and professing his ignorance that the remedy has been sanctioned by other practitioners. The cases reported by him confirm fully the efficacy of opium in appeasing the false pains which sometimes derange the natural order of labour, but the practice is too familiar to our English readers to require any detailed notice on our part. M. Foulhioux is very cautious in the dose of opium which he gives, and which consists of a teaspoonful of a five-ounce draught, containing 24 or 30 drops of laudanum, administered after each false pain.

From the review of the French provincial journals, we select the following particulars:—

HEMIPLEGIA — CURE NEARLY PERFECTED BY ELECTRICITY.—The manner in which electricity has been seized upon by quacks and other imposters is, perhaps, one of the chief reasons why that powerful remedy has been abandoned by physicians; yet we find numerous cases on record of its efficacy in certain forms of paralysis. M. Bouisson gives the following case:—

Madame B., 56 years of age, had always enjoyed the most perfect health, when on the 12th April, without any premonitory symptoms, she was suddenly seized with hemiplegia of the left side. Motility was completely annihilated, but a little sensibility remained. The symptoms were alleviated by blood-letting and revulsives; however, the patient still continued to be very unquiet. She could hardly utter a syllable; there was retention of urine, great constipation, and constant cramps in the paralyzed limbs. In this state Madame B. was submitted to the electric machine. The first experiment lasted an hour, and at its termination, the patient, who previously was unable to support herself on the inferior extremities, stood up alone, and was even able to bend the knees slightly. After the second sitting her countenance was much improved, and the sense of hearing became more acute. After an interval of two days a third application took place, and from this moment the patient got rapidly better. A state of plethora set in, which required the use of leeches, purgatives, &c., and after the twentieth sitting the lady was able to return home.

CURE OF PROLAPSUS ANI BY THE ACTUAL CAUTERY.—The *Belgian Medical Observator* contains the following case, in the following terms:—The actual cautery is an operation rejected almost universally from practice by modern surgeons. It would appear, however, that Professor KLUYSKENS has been in the habit of employing cauterization for many years, and

* Thackrah, p. 158.—Raspail Chimie Organ, p. 373.

that he has, moreover, been constantly successful. The actual cautery is more particularly required, according to the professor, in cases where the prolapsus of the gut is old, and the mucous membrane indurated, fungous, or degenerated. In these cases M. KLUYSKENS rejects the circular excision, and the method of DUPUYTREN, and proposes cauterization, which is accompanied by little or no pain, and gives rise to no dangerous accident. When the eschar comes away there remains a clean wound, which is cicatrized in a few days, so as to render any relapse impossible.

Case.—A. M., fifty years of age, of a weak and relaxed constitution, was received into the civil hospital of Gand, in April 1834, to be treated for a prolapsus of the mucous membrane of the rectum. When young she had been affected with syphilis, and bore deep traces of the disease about the genitals and anus. The tumour had been formed slowly, and had acquired the volume of an apple; it was formed of the swollen mucous membrane, which was livid, callous, and insensible to the touch. M. KLUYSKENS decided on applying the cautery. The patient having been placed on the knees in a convenient posture, three oval irons, heated white, were applied in succession to the tumour, and the point of each was passed a little into the anus. The patient, who had cried loudly during the preparations for the operation, remained quite tranquil during its execution. A simple dressing was applied. The next morning the patient suffered very little, and said she felt nothing at the time of the operation, except a burning heat. During the following days the eschar presented a favourable appearance, the bowels were kept open, the intestine showed no disposition to descend, and in a few days the woman left the hospital perfectly cured.

CATHETERISM IN THE FEMALE, &c.—This is an excellent paper, in No. 50 of our French contemporary, by an interne at the hospital of *La Charité*. M. LARCHER commences by some anatomical remarks on the female urethra. This canal makes a gentle curve, the convexity of which is inferior; its external orifice is lower than its internal or vesical one. The length of the female urethra is from twelve to fifteen lines; M. LARCHER has seen one twenty-two lines in length.

The parietes of the urethra are formed of two membranes; an internal mucous one, and an external, fibro-erectile, eminently contractile membrane; of this last property the author gives a very striking proof.

In ordinary cases the orifice of the urethra is easily found, and the surgeon meets with no difficulty in the introduction of the catheter (let us remark, *en passant*, that the French surgeons always uncover the woman, and *look* for the orifice), but in others the greatest difficulty is experienced; thus the author relates the case of a female at *La Charité* affected with a cancer of the rectum which had destroyed the recto-vaginal wall, and reduced the whole external genitals to one fungous mass; this woman became affected with retention of urine; the interne attempted to sound her, and in one case succeeded after three-quarters of an hour; on a second occasion he was compelled to renounce the attempt. After enumerating several of the causes which may render the introduction of the catheter difficult, and criticising the rules given by MM. ROUX and VELPEAU, for the introduction of the sound without exposing the woman, the author proposes as the best guide the tubercle formed below the meatus urinarius externus. This, however, is no discovery, as he seems to think; for the existence of this tubercle, and its utility as a guide to the orifice of the urethra, were long ago pointed out by British accoucheurs.

The third part of M. LARCHER's paper contains several interesting cases of organic and spasmodic stricture of the urethra in the female. They were all more or less relieved by the employment of the bougie.

SOURCE OF ANIMAL HEAT.—From observations lately made by M. HERMANN, it would appear that the modern doctrine of the formation of animal heat is founded upon just grounds. According to this theory, animal heat is nothing but a chemical product resulting from a process analogous to combustion, and which takes place during respiration. In this theory, animals who do not form any water by their respiration, ought to produce as much caloric as the carbon which they transform into carbonic acid would emit by being consumed. This proposition has been confirmed on three chaffinches on which M. HERMANN lately experimented. In the space of forty-eight hours these birds reduced to a liquid, in the calorimeter of LAVOISIER, 16,960 grains of ice, and 165.2 grains of carbon were found in the nutriment which the birds had taken during that time. These numbers accorded very closely with those resulting from the theory; for if we admit that one part the carbon, while being converted

carbonic acid, melts 104 parts of ice, the 165.2 grains of carbon should melt 17,180 grains of ice.—*Journal of the French Institute*, No. 81.

INTERCEPTED LETTER.

"Dear Sir Henry,—I perused your letter with no ordinary emotions. With regard to the numerous paragraphs published in the newspapers by a Mr. Guthrie, Sir Astley Cooper and myself agree most perfectly with you, and there cannot be a doubt that such a system of advertising is highly disreputable to the profession.

"With sentiments so completely in accordance with your own, I expressed myself in as strong terms on the subject as I could venture to use, and hinted the propriety of a *quiet retreat*. But the modest author has such a spirit, that I had little control over him, and, in plain English, am really afraid of him. And when I explain to you his whole history, and all that I have done for him which I thought it my duty to do, I feel convinced, my dear Sir Henry, that you will sympathize with me upon this occasion. To tell you every thing about him is also but justice to myself; and if the public knew only one half of all that I have had to contend with on his behalf, they would not be surprised at this advertising system, which he has now set a going upon so *large* a scale.

"I must begin this narrative by telling you, that I got hampered with Mr. Guthrie very early in life. His father, a native of Ireland, was a prosperous man, and reared up his son, George James, my protegé, for the medical department of the army. At that time scarcely any education was necessary for this branch of the service, and as the Guards were considerably better than other foot regiments, I have heard Mr. Hay, then surgeon to the Guards, declare that Master George's father, ever anxious for his son's welfare, offered him a ten-pound note to use his interest in his behalf to get him an appointment in the household troops.

"Young Guthrie was not immediately under my command, until I took charge of the army during the Peninsular war. At that time I kept the medical officers under such strict discipline, that they durst not say that their lives were their own, so that the true character of George was not developed until his services were no longer required, the blessings of peace having succeeded the horrors of war. He then fastened himself upon me, and I have never been able to get away from his gripe since. He took the impudent liberty, contrary to my wish, of planting himself next door to the Medical Board, for the avowed purpose of being always in readiness to attend any sick officers who might present themselves to the Board, or might require *certificates*; and, besides, the circumstance of his residence being next door to my own, gave him the appearance of having some direct connexion with the Board. At this period, however, I found him by no means qualified for private practice, although he had cut off plenty of legs and arms in the wholesale way, as we are obliged to do in the army. He, therefore, very judiciously became a pupil of Sir Charles Bell, who taught him the rudiments of anatomy and dissection (and who, by-the-by, never hesitated to spread charges of George James's subsequent piracies from him), and this enabled him to compile his book on gun-shot wounds, a work for which he certainly got some credit among those who knew nothing about the distortion of the materials, and the manufacture of the cases.

"At this time Sir William Adams was annoying me very much by attending the ophthalmic cases in the army, and I was, therefore, determined to crush him. Now, George James was the very man for this purpose, but to induce him to promote my object it was necessary to make it answer his own. Accordingly it became necessary for us to start an Eye-Infirmary, and to appoint George James to the important office of oculist, but having had no opportunities of seeing diseased eyes, you may suppose the havoc made amongst the poor blind at our new institution, and hence it got the name of the *Blind Manufactory*. I now recommended George James to publish *a book* on diseases of the eye, and this advice he adopted. It was a very *large* book,—equal in size to any published since, but it was an *omnium gatherum* from the German authors. I recommended to him two German translators, for, as you may suppose, he was perfectly ignorant of the German language, and they hatched amongst them the production to which I allude. But notwithstanding this, and all my efforts, the institution did not succeed, and the system that went on in it gave me great uneasiness. At last it became exposed in The Lancet, by a correspondent calling himself 'Acies;' but we all thought we knew the author, and we determined, as you perhaps may recollect, to prosecute the editor for a libel, not expecting to get any money, but with a view to expose the infamy of the libeller. Accordingly we had every *respectable* practitioner we could find, subpœnaed to

puff the oculist. But, at the twelfth hour, we withdrew, as the principal evidence was the handwriting of the libeller, which we could not get for less than fifty pounds.

"Matters got worse and worse after this, and Dr. FORBES, a most kind and attentive officer of the hospital, whom I had induced to become physician, was now so dissatisfied with its management that he determined to bolt. Nothing, in fact, in the way of *promise* would persuade him to remain, and, in short, he became so disgusted with GEORGE J.'s conduct, that he was induced to publish a statement, in which he went so far as to use these words: 'The business at the Eye Infirmary has for a long time been conducted, not only in a very negligent, but, in many respects, in a very disgraceful manner. Mr. GUTHRIE is so irregular and uncertain in his attendance, often not coming at all, that the patients are frequently obliged to go away, although coming from a considerable distance, without being able to see him.' Matters did not end here, and being an old soldier, I saw an approaching storm, and then GEORGE J. got into new troubles. Dr. FORBES's exposure of the unfortunate practices which went on at the Eye Infirmary, particularly the conduct of the surgery-man DAVIS, whom Mr. GUTHRIE absolutely employed as a kind of assistant, it became a great object to secure Dr. FORBES's *retreat*. Finding lesser measures would not succeed, another project was adopted, and I am credibly informed that the present dramatic performance at the Olympic Theatre, entitled *Fighting by Proxy*, was founded on the occurrence, and the character which LISTON acts, of *Mr. Flinch*, is a portrait of no less a man than GEORGE JAMES himself.

"These events are sufficient to give you, my dear Sir HENRY, an idea of the work I have had to go through in my dealings with the late President of the College, and will also no doubt account to you, most satisfactorily, for the line of conduct he has pursued in public life since these events, up to the time of the puffs. I therefore beg you will clearly and distinctly understand that I consider my hands washed of the party; and that I am accountable in no way whatsoever, either to the College of Surgeons or the College of Physicians, for any part of his conduct which may have infringed upon the laws of those distinguished bodies. I am quite aware of the distressing situation in which he has placed us all, and the opportunity he has given to his enemies to expose him.

I remain, with great respect,
Your obliged and devoted servant,
"J. M.

"A. M. B., Berkeley-street, Dec. 23, 1834."

MARYLEBONE INFIRMARY.

To the Editor of THE LANCET.

SIR,—The *Medical Gazette* has given the state of the poll, on the election of a physician to the *Marylebone Infirmary*. Perhaps it may be equally useful to the profession that something more should be stated than the mere *numbers* on that occasion.

Be it known, then, that the affair became a mere *party* question. Of the two gentlemen whose causes were the most warmly espoused, the first was of one political party, the second of the other. Dr. Marshall Hall resolved, it seems, to stand upon the basis of professional merits alone.

Now, let your readers judge of the result! Is it honourable to our profession—is it honourable to the candidates, is it honourable to the electors (the *guardians* of the *poor*!), that politics and party, mere party, should decide such a question as that of the choice of a physician for the "poor," irrespective of professional standing and labours? For, without giving the least possible offence to either of the other candidates, we may surely affirm that they have not, *as yet*, deserved quite so well of our profession as Dr. Marshall Hall. And is it not deplorable—is it not sickening—to think that, in order to obtain a useful appointment of this kind, the members of our profession must first meanly stoop to act the part of partizans? Is there no mode of rescuing us from such degradation as this?

And is there no mode of rescuing us from this farce of committees to examine the testimonials,*—from this mockery of elections to determine the merits—of candidates? Will any man of high reputation in his profession, and of independence of feeling and character, be again found to become a candidate under circumstances so unworthy and so degrading?

It avails little, however, merely to declaim against injustice. The writer of this short note, therefore, suggests that the directors and guardians of the poor of Marylebone would confer a great benefit upon the poor, themselves, and us, by placing the nomination of their medical officers, under proper regulations, in the hands of a select number of men, removed from the scene of action, and honourably known in *our own* profession.—I am, Sir,

* Surely *Dr. Marshall Hall* did not condescend to send "testimonials!"—*Correspondent.*

your obedient servant, a member of the medical profession,

A PARISHIONER OF MARYLEBONE.

December 31, 1834.

*** The successful candidate was, we understand, Dr. CLENDINING. This gentleman, we presume, if politics had any thing to do with the election, was supported by the "liberal" party,—an advantage which "Civis Medicus" could not expect from real reformers in medicine, for the ignorance of that writer of the true principles of medical government is not to be surpassed. The name of the second candidate, of whom we know nothing, we cannot recollect; but that gentleman, we suppose, was the Tory, and he found himself in a minority of one to two.

DETECTION OF POISONING FOURTEEN MONTHS AFTER DEATH.

SOME very suspicious circumstances have been recently brought to light in Bristol, respecting the death of Mrs. Clara Ann Smith, a widow lady who resided in Trinity-street, in the above city, and who *died about fourteen months since*. The result of an inquiry into the subject at length induced Mr. GRINDON, one of the coroners, to issue his warrant for the disinterment of the body, for the purpose of holding an inquest; and a jury accordingly assembled on Wednesday week last (Dec. 24th). Its members having been sworn, the jury proceeded, with the coroner, to St. Augustine's church-yard, where the grave, which was about nine feet deep, had been previously opened. The inscription on the breast-plate was "Mrs. Smith, died Oct. 26th, aged sixty years." The coffin was then disinterred, and the lid having been taken off by the undertaker's man, who had screwed it down, the corpse was exposed to view. From the unusual depth of the grave, a good deal of water had obtained admission into the coffin, and the head, the chest, and the skin of the thighs and legs of the corpse, were converted into adipocere. The stomach and intestines were in an extraordinary state of preservation, which we believe is generally the case in instances of death from arsenic. The antiseptic or preservative powers of which had, in fact, protected them from falling into decomposition, to such a degree that their coats might have been used for demonstration at a lecture. After the stomach, duodenum, and the intestines, had been taken out, and the head removed, the corpse was reinterred and the inquest adjourned to the following Friday.

The persons engaged in the investigation then proceeded to the medical school, where Mr. HERAPATH, the teacher of chemistry, in the presence of the professional gentleman retained by the accused party, examined the contents of the stomach, and proved to their entire satisfaction the presence of sulphuret of arsenic. By a series of masterly experiments he first of all reduced the sulphuret to metallic arsenic, then converted that metal into arsenious acid; and having dissolved this, he produced the green of Scheele with ammonia—sulphate of copper; the yellow with ammonia—nitrate of silver; and yellow with sulphuretted hydrogen. The medical gentlemen present were loud in their praises of the manner in which Mr. HERAPATH performed these experiments.

The present is, we believe, the first instance in this country, in which a poison has been found when exhumation had taken place at so late a period as fourteen months after interment; and that it has only once been effected after such a period in any other place.

On the result of the experiments being known, Mrs. BURDOCK, the accused party, was immediately taken into custody, and after five days most minute investigation, the jury brought in a verdict of "Wilful Murder" against that person. The coroner immediately issued his warrant for the committal of the prisoner.

An accurate copy of the medical evidence which is very voluminous, has been promised to be submitted in a few days to our examination. Dr. RILEY and Dr. SYMONDS, teachers in the Bristol medical school, were examined, as well as Mr. HERAPATH.

DURATION OF MEDICAL PROFESSORSHIPS.

To the Editor of THE LANCET.

SIR,—I am encouraged by the steady and valuable service which you have always rendered to the cause of medical reform, to request your insertion of the following remarks on a very important subject, in which the great body of the profession are deeply interested.

It is well known that medical professorships have hitherto been granted *for life*, while it is also known that professors, as they grow old, become lazy, indolent, and careless about the march of improvement in the different branches of medical science.

In the vast number of highly-talented young men, now entering, or lately admitted to, the profession, how few, under the existing order of things, can look forward to the honourable and laudable display of their knowledge, through the medium of professional chairs! A remedy to this exclusion, and to the present monopoly of those offices, seems reasonably to present itself by the following means:—Let the profession, all over Great Britain and Ireland, forthwith put forward their strength, in petitions to the Secretary of State for the Home Department, who has many chairs in his gift, to the municipal corporations, who are also patrons of chairs in universities, praying, that *henceforth*, and until the concours or some just system be adopted by law, all professional appointments shall be conferred for a *limited number of years*—say, seven or nine.

Delicacy forbids interference with the elder brethren of the profession now occupying chairs; but, let it be a prayer in each petition to the Legislature, that in the bill to be brought in to reform the medical profession, a clause may be introduced, to the effect, that *all professors who have been, antecedent to the passing of the act, five years in their chairs, shall vacate them at the end of five more.* I am, Sir, your constant reader,

ANTI-MONOPOLIST.

Dec. 24th, 1834.

ST. GEORGE'S HOSPITAL.

ENLARGEMENT OF THE TONSILS.—ATTEMPT AT EXTIRPATION.—PUNCTURING.

A LITTLE boy came into the hospital labouring under simple enlargement of the tonsil glands. On examining them when first the child came into the hospital, one of Sir B. BRODIE's colleagues suggested their partial extirpation; but this advice not being suitable to Sir B. BRODIE's views of the affection as it then existed, it was declined, and the tonsils were ordered to be touched with the tincture of iodine daily, with a view to absorption and their diminution. This plan was persevered in for some weeks, at the end of which time no perceptible diminution could be detected, when Sir BENJAMIN remarked that the child's system seemed to resist the action of the iodine, as the tonsils did not seem to be at all affected by it, nor did any part of the child's body emaciate, as had been the case with two children whom he had attended,—a circumstance which could only be accounted for by the supposition that a portion of the iodine had been absorbed into the system. Such being the state of things, Sir B. BRODIE recurred to the advice which was originally given to him, and then suggested the propriety of the removal of the tonsils.

July 23. The child was brought by the nurse into the operating theatre, and Sir BENJAMIN, armed with a silver shield on the left forefinger, and a pair of ASSALINI's forceps (made longer than usual for the purpose of more easily grasping the diseased part) in the right hand, grasped one of the tonsils with it, and keeping the jaws apart with the aforesaid shield, proceeded to cut off a portion of one of them with a curved sharp-pointed bistoury. After some laboured attempts on the part of the operator to remove the cause of mischief, and on the part of the patient to get rid of the silver gag in his mouth, he, by a vigorous effort, forcibly closed both jaws and flattened the silver shield between his teeth, jamming, at the same time, the finger that was in it. Both instrument, shield, and tenaculum, were then withdrawn, and the operation was at once declared impracticable.

After the child was removed to bed, Sir B. BRODIE addressed a few observations to the gentlemen present on the case. He remarked that enlarged tonsils were generally a concomitant symptom in those constitutions which laboured under what was vulgarly termed a "scrofulous diathesis." They were most generally noticed during the early years of life, or at the early age of adults, although he knew two gentlemen, the one aged forty, the other aged sixty, who were now labouring under this affection; but such cases were rare. Sometimes they would be slow of enlargement, at other times their growth would be such as to form a serious impediment in breathing, and sometimes almost totally to obstruct it. He knew of a child labour-

ing under this affection who was obliged to be watched all night by its nurse, to prevent suffocation, which was only checked by the child being taken up and tossed in the nurse's arms. With respect to the removal of the tonsils, this might be effected in various ways; stimulants might be applied to the part, such as capsicum and muriate of ammonia, in the proportion of one of the former to nine of the latter, applied by means of a camel's-hair-brush; lunar caustic in substance or in solution; or the tincture of iodine, as had been used (but ineffectually) in the present case. Such stimuli as these would sometimes arrest their growth for years, but if these failed they might be removed by the ligature, the caustic, or the knife. With respect to the first of these methods, the ligature, he did not much approve of it; it required to be on for some time, during which the child's throat was filled with a nasty, foul, disagreeable slough, which not only proved a local source of irritation, but sometimes affected the general health, by the offensive discharge which was kept up from the part during the whole time. With regard to the use of caustic, he had seen it once used by a surgeon, but it was a long and tedious process, the tonsils having to be touched with the caustic every third day, the pain, therefore, being very great, and the cure not being effected within a considerable time (we believe three months), and then only partially. Under these circumstances he should never be inclined to recommend it to others, or to perform it himself. The practice of excising the tonsils was a very safe and judicious one; and when performed on those who had more command over themselves than this child (and who knew that something was going to be done for *their benefit*), it was a very safe and easy one. The last case in which he operated, he was occupied for an hour in removing a tonsil. It was a case of urgent necessity, and the child's life was in imminent danger, he therefore took a great deal of pains in removing it. The child which had just been removed from the operating theatre, was not in imminent danger, as it could breathe, and therefore he did not think it worth his while to take so much trouble about it. The tonsils would sometimes easily inflame, and become enlarged, from the child catching a cold. The method of extirpating them was to seize them at their posterior part, which hung down out of sight, in the bag of the pharynx, and draw them upwards on the tongue, and then cut off a part of them. There was no necessity for remov-'n them entirely, as the disease did not equire it; and, doubtless, they were placed there for some good purpose. Hemorrhage seldom occurred. When, however, this method failed, or, from unforeseen circumstances, it became impracticable, the tonsil might be slightly punctured every now and then, with some convenient instrument;—a course which the house-surgeon was eventually requested to adopt in the case to which these remarks were appended.

The plan of puncturing was persevered in, but without much benefit, we believe, to the patient. The house-surgeon states, that the puncturing the tonsils is almost as difficult as Sir B. Brodie had found the extirpation to be.

This same operation of extirpation of the tonsils was successfully performed a few days afterwards by the same operator, on a young woman "who had some command over herself, and who knew that something was going to be done for her benefit," and from which benefit she experienced very great relief.

Interposition of Ligament between fractured ends of Bone.—Amongst the operations lately performed here, was one by Mr. Keate, in a case of ununited fracture of the left humerus. The woman was admitted into the Hospital thirteen months since, having fallen from a coach-box and broken her arm. The usual means were adopted, without, however, producing any reunion of the fractured ends of the bones; and the woman being in a low state of health, and of a decidedly nervous temperament, she was recommended by Mr. Keate to go out of the Hospital, to see whether change of air would not benefit her, and to return again whenever she felt better. Accordingly, a few months since, the woman returned to the Hospital much benefited in health, but the fracture remained in the same unsatisfactory state as before. Upon making an accurate examination of the part, it was discovered that there was some foreign substance (supposed to be a portion of muscle) interposed between the fractured extremities of the bone, which prevented their uniting. A consultation of the surgeons was accordingly held upon the case, and it was determined to cut down upon the fracture, remove the foreign body, and place all parts in actual contact.

In performing the operation, Mr. Keate made a longitudinal incision about three inches long, over the seat of the fracture (about half-way between the shoulder and elbow-joints), and cut down to the bone; between the fractured extremities

of which a triangular portion of ligament was found, from the process of ossification having only proceeded thus far towards the formation of a callus. This was dissected out with the scalpel. The fractured ends, which were quite smooth, were cut off with the bone nippers, and a dossil of lint was interposed between the lips of the wound, which were afterwards brought together by straps of adhesive plaster and bandages. Splints were applied, and the woman was sent to bed. After which Mr. KEATE remarked, that although in many cases remedies and operations of the above nature were found to fail, they sometimes also succeeded, which he hoped would be the result in the present case. This expectation has since been realized, as the fracture is slowly reuniting.

In a case of phymosis, operated on by Mr. CÆSAR HAWKINS, where there was a venereal sore with thickened extremity of the prepuce, the latter was divided by a simple incision, and the two edges were everted backwards, Mr. HAWKINS remarking that nothing more was necessary in this case. He particularly begged attention to the method which he employed in bringing the external and internal edges of the wound together, as a means of preventing their retraction, and the formation of an ugly sore. Mr. HAWKINS seemed to attach a vast deal of importance to this proceeding, which, however, was not appreciated by the audience to the extent desired.

In a former No. of this journal we noticed the case of a little boy named George Green, who had been under the care of Sir B. BRODIE for ununited fracture of the bones of the right leg. At the conclusion of our last report, it was stated that the wound made by the previous operation had completely healed. After this Sir BENJAMIN BRODIE applied splints, strapping, and bandages, so as to make pressure upon the ununited surfaces, according to Mr. AMESBERY's plan of procedure in such cases, and in this state the boy's limb was left for some period of time, when the pressure was removed, but not the slightest union between the fractured ends of the bone was perceptible, and they could be moved upon each other as freely as before. The boy was again ordered to be kept quiet, and for upwards of four weeks nothing was done for him. At the end of that period Sir B. BRODIE again examined the limb, and seemed inclined to try the experiment of passing a seton through the posterior portion of the fracture, after the plan recommended by Dr. PHYSICK of Philadelphia. Our readers will remember that this plan had been already previously tried while the boy was under the care of Mr. GRAINGER, but had failed; and to add still further to the expectation that the plan afforded but a slight chance of recovery, it may be observed that it has been stated by Dr. PHYSICK that the cases in which the passing of a seton between the ununited ends of the bones was found principally to succeed, were those of ununited fracture of the bones of the upper extremity, and not in those of the lower extremity, or very rarely so. Yet, in spite of these chances against the feasibility of the plan, Sir B. BRODIE requested the other surgeons to examine the case, and report their opinions upon the plan proposed. This was done; and the result was, that a seton was judged an advisable means to be adopted in such an apparently intractable case. The boy was accordingly brought into the operating theatre, when a treble silk thread was passed through the fracture, and splints and bandages were applied. The boy was then sent back to bed. Some slight febrile excitement followed, several days after the operation, but nothing more. The wound was examined, but no progress whatever has yet been made towards a cure. One reason which actuated Sir B. BRODIE in performing the operation was, the possibility that (to use his own words) when formerly done it might not have been performed in a satisfactory manner.

VERBATIM.

PATIENT. If you please, Sir Benjamin, will you look at my toe?

SIR B. Let me see it. Why, it looks like gout. Did you ever have it before?

PATIENT. Yes, Sir Benjamin.

SIR B. (*to Mr. Patten, the house-surgeon*). Give him ℳxx of the wine of the *root* of colchicum, in ℥iss of saline mixture. That is Sir H. Halford's prescription, he gives it to every gouty person he meets with, and it cures them like magic.

PUPIL. Do you prefer the root of colchicum to the seeds, Sir Benjamin?

SIR B. Sir H. Halford prefers it; he says it is more certain in cases of gout, and I have *great faith* in Sir Henry's prescriptions; he is really a very DEXTEROUS prescriber.

[Mr. WAKLEY takes this opportunity of respectfully offering the enclosed address to the consideration of the medical practitioners of the Metropolis. Notwithstanding the unfortunate division of the reform interests, Mr. WAKLEY is assured, on the testimony of his friends in every part of the Borough, that he may go to the Poll, on the day of election, with a confident expectation of success] :—

AN ADDRESS

FROM

MR. WAKLEY

TO THE

ELECTORS OF THE GREAT METROPOLITAN DISTRICT OF FINSBURY.

GENTLEMEN,—

When I was requested by an immense body of your Brother Electors, on the 8th of this month of December, to become, for the third time, a Candidate for your suffrages, in the event of a dissolution of Parliament, I cheerfully complied with their solicitation. This renewed demand having proved the undiminished confidence of my friends in my political integrity, I was afforded an early opportunity of declaring that I was fully prepared to redeem the pledge which I gave at the conclusion of the election in June last,—namely, that on the occurrence of the very first vacancy, I would again stand forward as a Candidate for the suffrages of the Reformers of Finsbury.

Parliament, then, is to be dissolved; and, for the third time since your enfranchisement, you will be called on to pronounce, by *your* votes, what are *your* opinions on those measures which you may desire to see adopted in relation to the exigencies of the nation.

But why is Parliament to be dissolved? This question is asked by millions of your fellow countrymen. Why, because the Ministers whom the King has just called to his councils, consider that the present House of Commons is not sufficiently supple to be moulded to their purposes. In a word, a more *convenient* assembly is required. It is neither our business nor our duty to pry into the secrets of the Palace; but it has been everywhere alleged that the MELBOURNE Ministry was discharged, because it was about to distinguish itself as a *reforming* Ministry. Assuredly this report is confirmed by the character of the new Cabinet. The selection implies, in reality, that the question of Reform was by no means settled by the passing of the Reform Act, but is now in direct issue between a factious oligarchy and the people of England. On the solution of this great question, the decision of the Electors of the Metropolitan District of Finsbury, must prove as potential as that of any class of voters in the Empire. Are *you*, then, Gentlemen, for Reform, or for the perpetuation of acknowledged abuses? Are *you* for a diminution of taxation, or for adding to the weight of our public burdens? Are *you* for the Abolition of the Tithe System, or is it your desire that the Abuses of the Church should co-exist with that national establishment? Is it your wish that the millions who dissent,—many from the doctrines, and nearly all from the discipline, of the Church,—who have long and patiently suffered injustice, rather than violate the pure dictates of conscience,—should continue to be the victims of an odious intolerance, or claim you for their persevering and virtuous maintenance of the cause of Religious Liberty, a total and an unqualified exemption from every Civil and Political Disability?

Gentlemen,—be not deceived. Apply your knowledge to these questions. Test them by your own circumstances and feelings. Reflect on what *you* desire for yourselves and for the nation. Remember, I conjure you, that in voting for Candidates to represent you in Parliament, *you* virtually vote upon these questions. For, observe! The Commons House of Parliament is *your* Assembly. It belongs to the people. It was instituted, and has been reformed, in order that the opinions of the people may have weight and force in the government of the country. Take you care, then, that your opinions are not *mis*represented in that Assembly. If religious persecution be your object,—if you desire that the taxes which are collected from the produce of your industry, should be applied to the purposes of misrule and corruption,—that man only is capable of representing you who is opposed to all the sound principles of good and cheap government. If, on the contrary, you desire that society should exist in a state of tranquillity and happiness, and that our contributions towards the maintenance of the institutions of the State, should be paid with cheerfulness because they are well applied, — then it must be your inclination, as well as your duty and interest, to select persons to represent you in Parliament, who have by their labours, and by their opposition

to tyranny and corruption, that they are really anxious to proceed deliberately and justly in the great work of national regeneration.

Perfidious attempts are zealously made to deter you from discharging your duty to your country, by appealing to your supposed fears and prejudices. Reform is denounced by the abettors of misgovernment, as threatening "Anarchy" and "Revolution;" and Reformers themselves are stigmatized by the name of "Destructives." Calumny is an imposition to which all public philanthropists are obliged to submit; and they who flinch in a virtuous cause from a fear of slanderous imputations, are either weak of purpose or inefficient as moral combatants. The history of man, in his progress in a state of civilized society, affords a ready answer to this question;—Has there ever yet existed a successful Reformer in religion, in morals, or in politics, who was not, *in his time*, denounced as a dangerous innovator, —in a word, as "a Destructive,"—but yet whose memory, when ages have rolled on, has been honoured with the grateful and admiring reverence of mankind? If it be true that Reformers are "Destructives," what are they anxious to *destroy?* Those abuses, taxes, and burdens, which press, with such painful severity, on the productive industry of the nation. Thus the corrective hand of the Reformer is identified with that of Justice and Charity; hence the pleasure of doing good more than outbalances the evil of misrepresentation.

If, however, the Reformers are solicitous of destroying abuses, they are not less desirous of establishing advantages. And, since names are in fashion, they may with propriety be denominated "Constructives" and "Restoratives." They contend that tradesmen should be relieved from Taxes on Windows and on Malt, by the imposition of a *Property-Tax* levied on men of wealth, well knowing that measures of this description must prove the first steps towards perfecting a system of just distribution in the pressure of our national burdens. The "Constructiveness" of Reformers also extends to the institution of the Vote by Ballot, because they think that it is the *mind* of the Elector which should influence his vote in the selection of a Representative, and not his till, his bales of cotton, his casks of sugar, or his opulent neighbour's threats. Masses of property can scarcely be entitled to exercise the privileges appertaining to intellect, until land and metal are rendered susceptible of feeling, and can sympathize with the wants and necessities of humanity. Reformers are "Restoratives" in desiring the Repeal of the Septennial Act, and of thus bringing back to the people the right of electing their Representatives every third year. The trite old adage of "Short reckonings make long friends," was never applied more appropriately than with reference to Triennial Parliaments. If the Representatives discharge their duty in Parliament with fidelity and zeal, they must feel an honest pride while facing their Constituents. If, on the contrary, they neglect their duties, or abuse their trusts, three years must be quite long enough for the opinions of any body of Electors to be slighted or falsified in the Legislature of the country.

In "destroying," also, the self-electing practices of the Select Vestries, and Municipal Corporations, the Reformers consistently labour to throw wide open the vestry-doors to the rate-payers, and restore to the freemen of our Corporations the right of electing, periodically, the trustees and managers of the funds and general business of those institutions. Thus the *representative system*, on being frequently thrown into operation in the various districts and localities throughout England, would constantly remind the people of their electoral duties, for keeping pure the great controlling power of the nation,—viz., the Legislature. If rate and tax-payers cannot exercise parochial and other district rights, independently of Parliamentary statutes, they will soon be drawn into the vortex of government centralization, whence they will never be enabled to escape. In corporations, whether in parishes or cities, where the representative system is preserved in a pure state, we have the never-perishing elements of true national liberty. There cannot be a better maxim in politics than the one which states,—that government should in no case manage for the people those affairs which the people can manage for themselves.

In a Government so ancient as that of England, abuses have been established so insidiously, and have become so thoroughly interwoven with many of the conditions of society, that it is necessary to proceed in the work of reform with caution and prudence, lest unmerited injury should be inflicted on the innocent dependants of misgovernment. If the rights of property be invaded by the law, the shield of justice is taken from us, and law, ceasing to be a protection to society, becomes an instrument of plunder. A specimen of that species of *reform* which may be expected from the *present* Ministers, was furnished by them when they were last in office. In suddenly altering the law relative to the sale of beer, hundreds of Licensed Vic-

tuallers, who had embarked large capitals on the supposition that the then-existing statutes should remain in force, were plunged by the unexpected change into irremediable distress and ruin. That an alteration of the law was required with respect to the licensing system, none will deny; but a class of industrious tradesmen,—whose splendid asylums dedicated to the succour of the aged, and the protection of the orphan, are ornaments of, as well as an honour to, the metropolis,—ought not to have made the *sacrifices* of an alteration in the law, although that alteration was called for by the general welfare of the community. Here, where there were legal vested interests, absolute right of property, no compensation was made to the sufferers; whereas, in the case of the West Indian "slave *proprietors*," as they have been termed, compensation was made where there was *no* right of property. Yet these discordant proceedings were supported by immense majorities in both Houses of Parliament. True it is that the extinction of slavery could scarcely be purchased at too dear a rate. Still, if the House of Commons had really reflected the opinions of the people, it is impossible that measures of legislation, founded on such opposite and unjust principles, could ever have obtained the sanction of the Legislature.

In contending, therefore, for the restoration of Triennial Parliaments, the removal of the Rate and Tax-paying clogs on the Enfranchising Clauses of the Reform Act,—for the adoption of Vote by Ballot,—for an equal Commutation of Tithes, and the Correction of the Abuses in the Church Establishments of England and Ireland,—for the removal of the grievous Burdens which press so heavily on the great body of Protestant Dissenters,—for the Repeal of the Malt-Tax, Window-Tax, and Corn-Laws, and insisting on the imposition of a Tax on REAL *Property*, not affecting the annual profits of trade (which would make it a renewal of the hateful Income-Tax), I believe that I am calling for measures which, if adopted, would prove of essential and lasting advantage to the people of this country. Should your opinions accord with mine on these subjects, I may boldly claim your suffrages, as I know that I shall not be capable of falsifying your opinions, or voting in opposition to your wishes, in the Commons House of Parliament. In a comparatively limited sphere, I have, for the last twelve years, been engaged in the labour of reforming some of our public institutions,—viz. the Hospitals and Medical Colleges. During that period I have been opposed by the weapons which are usually wielded against Reformers; the expensive and tormenting powers of the law, immense Corporation Funds, all the instruments of usurped official authority, and that never-failing resource of monopolists and corruptionists,—the venom of personal slander. On no occasion, however, is it in the power of my opponents to allege that I have been deterred, either by their smiles or threats, from proceeding in the path of public duty,—attesting a degree of inflexibility in advocating measures of reform, which induces me to hope that I could serve you faithfully as your Representative in Parliament.

Gentlemen, permit me to observe, in conclusion, that I am wholly unconnected with any other Candidate, neither having formed a coalition, sought to form a coalition, or intended to form a coalition. I regard such compacts as dishonourable to Candidates, and a very improper interference with the exercise of the Elective Franchise.

Whilst, however, I boldly and unequivocally state, that my claims to support rest on the indestructible basis of pure public principle, I cannot avoid expressing an anxious and a fervent hope that you will make choice of TWO REFORMERS, and not select men of opposite conduct and opinions, who, by recording on all important occasions discordant votes, would not only render the exercise of your franchise useless, but would have the effect of exhibiting Finsbury, in the eyes of an intelligent community, as a district in which the doctrines and practices of Constitutional Reform have yet to be promulgated and understood.

Instantly, then, should the Electors decide on the *two Reform Candidates* whom they may deem it to be their duty to support. If at a public meeting, fairly and openly convened, it should be determined by a majority of the Electors present, that the individual who now addresses you ought to stand aside, and make way for some other party, confident as I am in the strength of my friends, rather than hazard the success of the general cause; rather than allow the enemies of all Reform to triumph—I will cheerfully submit to the decision, and immediately withdraw from the contest.*

---

* Since this address was written, a Meeting of Electors was convened by advertisement in the daily papers, and the result communicated to the electors in an advertisement which appeared in the morning papers of Thursday, and of which the following is a copy:—

"CHOICE OF REFORM CANDIDATES FOR FINSBURY.—At a great Public Meet-

Every individual who claims your suffrages at this eventful crisis, ought to be able to exclaim, with heartfelt sincerity, "*Ducit amor patriæ.*" During two years have I now occupied a position in the political field of Finsbury, encouraged on every public occasion by the exhilarating approbation of an immense body of your brother Electors. I do not now, therefore, appear amongst you for the first time. I am not guilty of the folly or the wickedness of hazarding the success of a good cause by producing *disunion* in the ranks of the friends of a liberal and an enlightened system of government. In the contest which took place in Finsbury at the election of 1832, you will recollect that I polled more than *two thousand* of your *votes*, embracing the extraordinary and almost unprecedented number of fourteen hundred plumpers; this strong demonstration in favour of the principles which I then advocated, and do still, and ever shall advocate, was displayed at a time when five Candidates were in the field, all of whom kept open the poll to the last moment permitted by the law.

When these most gratifying facts are placed in connexion with the increasing assurances of support which are furnished to my Committees from every part of your district, I cannot entertain a doubt relative to the successful issue of the contest; thus fortified by my confidence in your fidelity to the cause of Reform I shall proceed to the poll, under a firm, unshaken conviction, that on the last day of the Election I shall enjoy the distinguished honour of addressing you as your REPRESENTATIVE IN PARLIAMENT.

I have the honour to be,
Gentlemen,
Your faithful and devoted Servant,
THOMAS WAKLEY.

Greenford, Middlesex, Dec. 23, 1834.

---

ing of the Electors of Finsbury, held at the White Conduit House, on Tuesday last, when upwards of 2300 persons were assembled; J. T. RUTT, in the chair; the whole of the candidates having been invited to attend, and the candidates present having addressed the Meeting, a show of hands was taken to decide on the choice of candidates for the representation of Finsbury in Parliament, when there appeared—for Mr. Sergeant Spankie, 1; for Mr. H. W. Hobhouse, 3; for Mr. Wakley and Mr. Duncombe, the entire assembly, with four exceptions. It was then instantly resolved, without a dissentient voice,

"That T. S. Duncombe, Esq., and Thomas Wakley, Esq., are especially worthy of the support of this assembly, and should be most cordially recommended to the electors generally, as the only candidates who are entitled to receive the votes of the electors at the poll on the reform interest.

"J. G. WINN, Hon. Sec.

"Central Committee-rooms, Northumberland Arms, Clerkenwell-green, Jan. 1, 1835."

CORRESPONDENTS.

The information relative to the pantomimes enacted this Christmas at Rhubarb Hall, and especially the performance of Wednesday night last, may possibly be used next week. The pantaloons knocked about the other personages on the stage with a vigour quite unusual, derived, some thought, from the potations which are usual at this jovial season. Of sixteen of the dramatis personæ six were suffered to go by, six were tripped up, and four ran away in alarm.

The clinical lectures of Sir ANTHONY CARLISLE are unique. We may furnish a specimen shortly.

Two correspondents have written to know if we can furnish them with any information respecting a Dr. ROBINSON, an itinerant lecturer on "medical jurisprudence." We have no knowledge of such an individual.

A. B. has certainly been misinformed. We never, to the best of our recollection, exchanged a word with "Mr. Delisser." The conduct, therefore, which is imputed to that gentleman is to the Editor wholly inexplicable. *Does he covet notoriety?*

We think it better not yet to publish the letter of *Mr. D.* It will be better to wait a little.

Mr. D.'s communication relative to the election has come to hand. We think we can do him *service* on the occasion; let him drop us a note.

Scotus Alter has come to hand.

If Mr. Phillips will send us a *condensed* account of the method, it shall have a place with a notice of the correction forwarded.

A correspondent wishes to know where water truss India-rubber pads may be bought.

Mr. Cowan's letter next week. It is unavoidably delayed.

We will show *M. F.* next week, how the apparent contradiction may be reconciled.